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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Scraps from the Travels of Dr. David Livingstone*, with Remarks, By the Editor, JNO. DAWSON, M. D.

The Missionary Travels and Researches in South Africa, by Dr. David Livingstone, have developed much in regard to the geology, the hydrology, the meteorology of the continent; its natural history, ethnology, commerce, and the state of Medicine among the inhabitants.

It might not be out of place to state to the reader that Dr. Livingstone is a medical man, a Licentiate of the Faculty of Physicians and Surgeons of Glasgow. His medical observations, as a consequence, are entitled to more respect from the profession than they otherwise would be.

Another circumstance ought not to be omitted. He is of humble origin—in early life worked at a branch of mechanics; and while in this capacity concocted the plans that have resulted in giving him character throughout the civilized world. From the position of an apprenticed boy he has arisen to fame as a discoverer.

Dr. Livingstone went to Africa as a Missionary, and remained there about sixteen years. There were periods as long as three years, during which he never heard his own language spoken. The success of his Missionary efforts was retarded by the condition in which he found the inhabitants in the interior of the continent. He remarks, in a number of places, that but little if any thing can be done for the introduction of the Christian religion until the people are civilized—made acquainted with agriculture, the arts, commerce, etc. He regards it that a people must know how to plow, sow, and

reap; must know how to manufacture the implements of husbandry, and must do something in the way of exchanging their commodities with other nations, before they are qualified to appreciate a religion such as the Christian. This rather favors the theory, that grades of intellectual culture require a correspondence in religious systems.

The travels of Dr. L. embrace a journey from the Cape of Good Hope to Loanda, on the West coast; thence across the continent, down the river Zambesi, to the Eastern coast. Loanda, on the West coast, is in about latitude 8 deg., S. The point on the East coast, where the travels terminated, is in latitude 17 deg., 53 min., 8 sec. The time occupied in making the tour from Lake Ngami wanted only a few days of being four years.

METEOROLOGY.—The temperature of South Africa of course is varied by the usual circumstances, altitude, topography, the presence or absence of large bodies of water, rains, etc. At Colungo Alto, in latitude 9 deg., 8 min., and east of the terminus of the Congo river some 300 or 400 miles, on the 24th of May, the winter in this region, the thermometer stood at 80 deg. by day, and 76 deg. by night. The temperature taken during the month of December, on the banks of the Coanza, showed the general range of the thermometer to be 67 deg. at 7 A. M., 74 deg. at midday, and 72 deg. in the evening. The Coanza river, at the place where this observation was made, is distant from the western coast some 400 miles, and has an elevation of 4,210 feet above the sea. At Cabango, latitude 9 deg., 31 min., S. longitude 20 deg. 31 min. E., the cold in the mornings was severe to the feelings, the thermometer ranging from 58 deg. to 60 deg., though when protected sometimes standing as high as 64 deg. at 6 A. M. When the sun was well up the thermometer was noticed to rise to 80 deg.; in the evenings it was about 78 deg. These observations were made in the month of May. The author remarks: "All the interior of South Africa has a distinct winter of cold, varying in intensity with the latitudes. In the central part of the Cape Colony, the cold in the winter is often severe, and the ground is covered with snow. At Kuruman snow seldom falls, but the frost is keen. There is frost even as far as the Chobe, and a partial winter in the Barotse valley, but beyond the Orange river we never have cold and damp combined. Indeed a shower of rain seldom or never falls during winter. From the Barotse valley it is questionable if it ever freezes; but during the prevalence of the south

wind; the thermometer sinks as low as 42 deg., and conveys the impression of bitter cold." In the month of June, the middle of winter, observations were made on the banks of the Leeba, a river situated not far from the middle of the continent, and a tributary to the Zambesi. The temperature of the water in the morning was 47 deg., and that of the air 50 deg., which being loaded with moisture was very cold to the feelings. During the day the thermometer stood at 88 to 90 deg.; in the evenings it was 76 to 78 deg. In the month of November observations on the temperature were made in the Batoka country, situated not far from the centre of South Africa, and having an elevation of some 5,000 feet. The temperature at 6 A. M. was 70 deg., at midday 90 deg., and in the evening 84 deg. Water boiled at 202 deg. In the month of January, the summer of this region, and on the Zambesi river, at a point a little to the east of the centre of the continent, the thermometer at sunrise stood at from 82 deg. to 86 deg; at midday in the coolest shade, at 96 deg. to 98 deg., and at sunset at 86 deg.

It was observed, as a very general rule, that the difference between the day and night temperature was great. This was also more conspicuous in those regions near the equator drenched daily with rain, than further south, in the vicinity of the Kalhari Desert, where it rains but seldom.

Traveling from the Cape north to the Makololo country, the author passed through the east side of the Kalhari Desert. This Desert lies between 20 deg. and 26 deg. S. latitude. Here the atmosphere at times becomes very dry. During the dry seasons a *hot wind* blows over the Desert from north to south. It is said to be so devoid of moisture as to cause the wood of the best English seasoned boxes to shrink. The ferules of ram-rods made in England became loose, and on returning to England fastened again.

Geology of South Africa.—The author gives an ideal section of South Central Africa. This section shows an *elevated valley form* of the central portion of the continent. The interior seems to be a great *central plateau*. The coast east and west is fringed with mountains. The height in the central portion, at Lake Ngami for example, is 2,500 feet. At Pungo Andongo, not far from the west coast, the rocks attain an attitude of 4,000 feet. Then again at Kalomo, on the east side of the continent, the elevation is 5,000 feet. At Lake Dilolo (latitude about 12 deg. S.,) there seems to be a water-shed between the river systems that flow to the East and

West. This lake, by giving a portion of its waters to the Kasai, a tributary of the Congo on the West, and another portion to Zambesi on the East, communicates with the Atlantic and Indian Oceans. The continent on both sides, from the *ideal section* given, is marked with hills and mountains. These are made up of Trap-rocks and others of igneous origin. Proceeding towards the interior from each coast, Mica scist and Sandstone make their appearance. The central portion, where the greatest depression exists, is figured as being underlaid with Trap, radiated Zoolite ; and at several places Granite makes its appearance on the surface. Coal, and iron ore are found on the east side of the continent, in the vicinity of the Zambesi river.

The most elevated portions of South Africa the author thinks is in the vicinty of the Equinoctial line, as it is here that the two great rivers, the Nile and the Zambesi, take their rise. The Equatorial region is not, as was formerly supposed, a collection of high mountains. Dr. Livingstone is of the opinion that the basin-shaped structure which he explored on the south extends north to the Equator and beyond, and that the periodical floods of the Zambesi and the Nile are due to the water which periodically accumulates in this basin from the excessive rains.

Victoria Falls.—Not far from the centre of South Africa (latitude 17 deg., 51 min., 54 sec., S , longitude 25 deg., 41 min., E.,) on the Zambesi river, is what the author is pleased to term "*Victoria Falls.*" The river at the point where the water takes its leap, is a thousand yards broad. Below the falls it is suddenly compressed into a space of fifteen or twenty yards. "The entire falls are simply a crack made in a hard basaltic rock from the right to the left bank of the Zambesi, and then prolonged through the left bank away through thirty or forty miles of hills. The height of the falls is about 100 feet. The work is much fuller in details on the geology than could have reasonably been expected, considering the many obstacles in the way of research.

In regard to the physical conformation of the African continent, the author's observations verified the hypothesis put forth by Sir R. I. Murchison, President of the Royal Geographical Society, etc., in his Presidential Address to the Society in 1852. Sir R. I. Murchison arrived at his results by reasoning ; Dr. Livingstone from personal observation. Merchison's method is an instance of the use of known truths in ascertaining those that are unknown. While in his studi-

ers in London he elaborated a theory in regard to the physical conformation of Africa, that was scarcely improved upon by observation.

Hydrography.—Dr. Livingstone's researches have done much to correct the public mind in regard to the manner in which the interior is supplied with water. The great Sahara Desert, north of Soudan, and the Kalhari Desert in the south, have been looked upon as typical of the "unknown regions;" and not until Dr. Livingstone's researches was any thing definitely known. It seems, however, that South Africa, with the exception of a small desert, abounds in lakes and rivers, fully as much as the territories lying between us and the Rocky Mountains. The lakes are not of very great extent, or depth. Lake Ngami, discovered by the author, is something like 100 miles in circumference, but in many places very shallow, and interspersed with small islands. Lakes Tagayica, Marava, and Shuia, farther north, are figured as being larger. The two rivers before noticed, the Congo and the Zambesi, originate in the interior, the former flowing to the west, the latter to the east. These rivers for length and breadth rival the river system of the Mississippi valley. Their numerous tributaries make a plexus that covers over the whole country, supplying every part with abundance of running water. We have no room for the many names of the rivers figured on the detailed map constructed from the astronomical observations of Dr. Livingstone. But it is refreshing to contemplate their number and size. At their sources in the central plateau they are said often to be very broad and shallow, covering, in some instances, large tracts of country; giving to the country during the rainy season the the appearance of a system of lakes. Viewing the map it seems, indeed, that there is scarcely any portion of the vast territory that is not pretty well supplied by streams of water.

Agricultural Capacity of the Country.—The author witnessed but a comparatively small portion of the country but what was fertile. The soil upon the plains as well as that in the valleys and river bottoms, from the character of vegetation it sustains, could not be otherwise than rich. In most places the soil is a deep black loam, in many it is red from the presence of iron. The plains towards the equator are covered with grass ; are in fact great natural meadows supporting herds of buffalo, elephants, etc. Clumps of trees, beautiful groves, and large forests relieve the monotony of the scenery. The natives in the interior of Africa use only the hoe as an instrument of

culture, and the labor is performed by the females. This is true of the tribes in all the interior of South Africa—"The men engage in hunting, milk the cows, and have the entire care of the cattle; they also prepare the skins and make the clothing." Dr. Livingstone regards the soil as equal to the production of any kind of tropical grains or fruits. He saw the sugar-cane, the coffee-tree, the cotton and indigo plants growing wild. He also witnessed on the Zambesi, rice fields. Maize and beans, grow everywhere, and in some localities sweet potatoes, and melons and pumpkins. Besides such articles, Africa produces spontaneously a great variety of edible substances that are indigenous. With no part of the book were we more surprised than with what relates to the variety in dietetics. The soil produces without labor, in many places abundance of food for the natives. We have no space to enumerate the articles of spontaneous growth used as food. At the head of them seems to stand a substance called *manioc*, which the author states can be eaten either raw, roasted, or boiled, as it comes from the ground; or fermented in water, and then roasted or dried after fermentation, and baked or pounded into fine meal; or rasped into meal and cooked as farina; or made into confectionery with butter and sugar. The leaves boiled make an excellent vegetable for the table. The plant bears drought well, never shrivels up like other plants when deprived of rain. The root rasped while raw, placed on a cloth and rubbed with the hands while water is poured upon it, parts with its starchy glutinous matter, and this, when it settles at the bottom of the vessel and the water is poured off, is placed in the sun till nearly dry and thus forms the *tapioca* of commerce. This is but a specimen of the plants which the soil of Africa spontaneously produces as food for the natives.

From the character of the soil, the climate, etc., Dr. Livingstone concludes that South Africa ought to produce cotton, rice and sugar in quantities sufficient to answer the purposes of the world. Millions and millions of acres of prairie and river bottoms, as fertile as could be desired, might, he thinks, be brought into cultivation, a commerce thus established and large fortunes realized. At present nothing that the soil directly produces is exported. Elephant's tusks, beeswax and slaves are the principal exports. Among the central tribes money is unknown, there being no word in the language which represents gold or silver. The delta of the Zambesi, on the east coast, is made up of debris from the interior, washed down by

this great river and its tributaries. The soil is here very spongy, and water is obtained by digging at a few feet below the surface. The delta near the river and upon its most elevated spots is occupied with villages, huts, and in the Portugese possessions, there are a few houses built on tiles. The land here is so fertile, says Capt. Hyde Parker, that it will produce any tropical plant without much trouble. The inhabitants raise peas, rice, cotton, onions, beans, pumpkins, maize—or rather when the seed is once planted a succession of crops is the result.

From this brief notice of the agriculture of the country the reader cannot fail to be impressed with the belief that the soil is not cultivated at all. What can be done with a hoe, and that often made of wood, embraces all that we have of the farming process in the interior of Africa. Work is unnecessary to provide for the wants of the body. Nature has furnished a profusion and as long as the supply comes from this source, the native mind will be apt to continue to regard agricultural labor as a matter of supererogation. How far it is capable of being operated on by the excitements of trade and commerce with other nations, is a question that future schemes of benevolence must solve. European nations have been at work for four centuries on the borders of South Africa, and the natives have been taught to add to their list of necessaries fire-arms, powder, brandy, tobacco, different kinds of cloth, glass beads, coral, for which articles they now barter, as they did two hundred years ago, slaves, ivory, gums and beeswax. The Portugese in the Mozambique region work the natives as slaves, in gold mines, though the amount annually produced is insignificant.

Ethnology of South Africa.—Dr. Livingstone's contributions to the young science of ethnology are by no means meagre. It is true that his observations on this department are very much scattered through his journal of travels; yet when all that he has said on the subject is carefully gathered together, it becomes valuable because it seems to be incidentally expressed, rather than in the support of any particular theory. His observations embrace something of the physical conformation of the natives, their intellectual development, governmental and social customs, the system of morals that obtain among them, their diet, diseases, etc., etc.

The natives vary very much in different regions, so far as size and color is concerned. Some tribes are of low stature, while others, as for example, the Makololo, are tall, averaging six feet in height, and

well proportioned. The *color* also varies very much. A large proportion are not black but *coffee colored*. The author thinks the deep black color due not to intensity of heat, but to *heat* and *moisture* combined. We extract the following:

"Apart from the influences of elevation, heat, humidity and degradation, I have imagined that the lighter and darker colors observed in the native population run in *fine longitudinal bands* along the southern portion of the continent. Those on the sea-board, both east and west are very dark; then two bands of lighter color, lie about three hundred miles from each coast, of which the westerly one bending round, embraces the Kalhari Desert and Bechuana countries, and then the central basin is very dark again." * * * As proof of this view the author states that the dialects spoken in the extreme south, whether Hottentot or Caffre, bear a close affinity to those of the tribes immediately on their northern borders. One glides into the other, and their affinities are easily detected. In regard to the physical conformation of the tribes inhabiting the sources of the Congo river, the author remarks: "All the inhabitants of this region as well of those of Londa may be called true negroes, if the limitations formerly made be borne in mind. The dark color, thick lips, heads elongated backward and upward, covered with wool, flat noses with other negro peculiarities are general; but while these characteristics place them in the true negro family, the reader would imbibe a wrong idea if he supposed that all these features combined are often met with in one individual. All have a certain thickness of the lips, but many are met with in every village in whom thickness and projection are not more marked than in Europeans. All are dark but the color is shaded off in different individuals from deep black to light yellow. As we go westward we observe the light color predominating over the dark; and then again when we come within the influence of damp from the sea air, we find the shade deepens into the general blackness of the coast population. The shape of the head with its wooly crop though general, is not universal. The tribes on the east side of the continent, as the Caffres have heads finely developed and strongly European. Instances of this kind are frequently seen, and after having become familiar with the black color, so as to forget it on viewing the countenance, I was struck by the strange resemblance some natives bear to certain of our own English notables. The Bushmen and Hottentots are exceptions to these remarks, for both the shape of their

heads and the growth of the wool are peculiar. The latter, for instance springs from the scalp in tufts with bare spaces between, and when the crop is short resembles a number of black peppercorns stuck on the heads of the Balondi and Moravi."

In regard to another tribe, the Bashinge, the author remarks: "they seem to possess more of the low negro character than either the Balonda or Basongo; their color is generally a dirty black, forehead low and compressed, noses flat and much expanded laterally, though this is partly owing to the alæ spreading over the cheeks, by the custom of inserting bits of reed or sticks in the septum; their teeth are deformed by being filed to points, their lips are large." This tribe lives a few hundred miles from the west coast on the tributaries of the Congo river.

Of the Batoka, who live on the Zambesi river, the author remarks, they are generally very dark in color and very degraded and negro-like in appearance, while those who live on the highlands are frequently of the color of *milk and coffee*. All the Batoka tribe follow the custom of knocking out their upper front teeth at about the age of puberty. This is done by both sexes; the result is that the under teeth grow long and somewhat bent out, giving a hideous expression of countenance. The chief men have endeavored to destroy this unnatural practice, but have been as yet, unsuccessful. Of another tribe further down the Zambesi river we have the following: "Most of the men are muscular, have large ploughman hands. Their color is the same admixture, from very dark to light olive. Though all have thick lips and flat noses, only the more degraded of the population possess the ugly negro physiognomy. They mark themselves by a line of little cicatrices, each of which is a quarter of an inch long; they extend from the tip of the nose to the root of the hair on the forehead."

Among all the tribes encountered by Dr. Livingstone in his travels, the Makololo strikes the reader as the most worthy, possessed of the best feelings. It was the two chiefs of this tribe, Sebituane and Sekeletu, that rendered the author the most assistance in his progress through the continent. Sebituane, the father, died before the journey to the western coast was undertaken. Sekeletu succeded to his authority and became the patron of the author in all his schemes. He thus describes Sekeletu: "I found Sekeletu, a young man of eighteen years of age, of that dark yellow or coffee and milk color, of which the Makololo are so proud, because it distinguishes

them considerably from the black tribes on the rivers. He is about five feet seven in height, and neither so good looking, nor of so much ability as his father was." As remarked in a previous connection, the Makololos are tall and well developed. They are not only great warriors but great conquerors, having conquered in the time of Sebituane, their former chief, many of the tribes in every direction from Lake Ngami. It was from the chief of this tribe that Dr. L. got an escort to accompany him to both sides of the continent, and no one can read the description given of the manner in which these natural men served their leader, their faithfulness and kindness to him under all the trying circumstances, without being very favorably impressed in regard to the tribe of which they are members. Their instrument in war is the spear, knowing little or nothing of the use of fire-arms.

We might extend remarks very much further on the physical characteristics of the different tribes, but examples in sufficient number have been given to enable the reader to form an opinion that will do for all the tribes in the newly discovered portions of the continent. Those tribes in the vicinity of the settlements made by the Dutch, Portugese and English, have long ago been described. We should like to have heard what the author has to say in regard to some physical peculiarities of the Hottentots, noticed by former travelers, and alluded to in standard works on anatomy.

Wherever European races have settled on the continent of Africa, they have mixed with the natives, and, as a consequence, a race of mulattoes have sprung up. The Portuguese who pioneered the settlement of the African continent south, usually went to the country for the purpose of making money. They seldom, it seems took wives with them. It was common for them to have families by native women. Dr. L. states that these half-caste Portugese have less energy than their fathers. "They are not physically equal to the European Portugese, but possess considerable ability;" and it is said that these half-castes in a few generations return to the black color again.

Within the British colony, at the cape, there are districts inhabited by the descendents of Dutch and French refugees, who had fled from religious persecution. Those living near the capital still preserve their resemblance to the middle class in English counties. After the emancipation of the Hottentot slaves by the British government, a certain class of the whole population fled into the interior

and thus disolved their connection with the home government. These people now known as Boers, have been in the country for 200 years. "Two centuries," says Dr. L., of the South African climate have not had much effect upon the physical condition of the Boers. They are a shade darker, or rather rudier, than Europeans, and are never cadaverous looking, as descendents of Europeans are said to be elsewhere.

The *physique* of the natives is regarded as not only very perfect, but very powerful in resisting the encroachments of disease. The natives, near the western coast, and also those in the vicinity of the eastern coast are degraded by contact with European nations, who introduce among them intoxicating drinks, tobacco, etc. The tribes however in the interior, from their simplicity of diet and natural habits, are fine specimens of physical development. So powerful is the African constitution, that notwithstanding syphilis has been frequently introduced by Europeans, it crushes it out, thus preventing its spread.

With respect to the *intellectual* characteristics of the natives, the account given, although scattered, is pretty full. Nothing like science is known or cultivated. Says Dr. L.: "The human mind here is stagnant. * * No science has been developed, and but few questions are ever discussed except those that have an intimate connection with the wants of the stomach." Where the tribes have been directly or remotely in contact with Europeans, there seems to be more intelligence than among tribes of the interior. The Portugese slaves, and the descendants of those who were in slavery formerly to the English, are much more knowing than those who are apparently of the same stock in the central portions of the continent. Intercourse however with white men has not benefitted the condition of the natives. Although improved in intellect, their vices are multiplied. Dr. L. remarks: "The intercourse which the natives have had with the white men does not seem to have much ameliorated their condition. A great number of persons are reported to lose their lives annually in different districts of Angola, by the cruel superstitions to which they are addicted, and the Portugese authorities either know nothing of them or are unable to prevent their occurrence." In another connection Dr. L. says, that the native tribes think their own mode of living very superior to that of their white neighbors, and resist with pertinacity all innovations.

All Africans, it is said, believe in charms; and human sacrifices

on the death of chiefs, are universal north of 20° south latitude. "It is hard," says Dr. L. "to make them feel that shedding of human blood is a great crime; they must be conscious that it is wrong, but having been accustomed to blood-shed from infancy, they are remarkably callous to the enormity of the crime of destroying human life." This quotation is in reference to the Makololo tribe, the most noble tribe in our view, that Dr. L. describes. It is said of a certain tribe that they cut out the hearts of human beings to offer as sacrifices.

Intellect often shows its best parts in the formation of Governmental Institutions for the protection of life, liberty, etc. Throughout the continent explored, the natives are divided off into tribes—at the heads of which are the Chiefs. Usually the sovereingty is lodged in the hands of a single individual who has inherited it, or distinguished himself as a warrior, but occasionally it is exercised by two or more conjointly. Occasionally females succeed to supreme authority. The tribes are not so nomadic as Arabs. They usually settle down and claim a portion of territory as their own; through these territories they do not allow each other or strangers to pass without the levying of a tribute. There being no well settled boundary lines between the territories of different tribes, disputes arise; the troubles from this source, the recognition of the doctrine, to its fullest extent, that "*might gives right,*" the want of consciousness that it is wrong to shed human blood, explain the circumstance that war is so universal, that it rises to the character of an institution. As a general rule the Chiefs are autocrats—autocrats in the severest sense of the term, they have control over the rights, property and lives of their subjects, and without having their authority called in question can sell their subjects as slaves, or call them up and sacrifice their lives. Dr. L. suggests, however, that the exercise of their authority in such respects has been exaggerated, that they do not often sell the members of their own tribes, but those taken in war. There are no written constitutions or statutes defining prerogatives, rights, etc. The whim or caprice of the Chief, at the moment, takes the place of these.

The character of the natives, as seen in their arts, is sketched in different places in the volume before us. We have seen that the hoe is the only instrument of agriculture; ploughs and waggons are unknown to the tribes in the interior. "The acme of the Bechuanas, (a tribe communicating on the south with the Cape Colony) is the

possession of cattle and a wagon. It is remarkable that although these latter require frequent repairs none of the Bechuanas have ever learned to mend them. Forges and tools have been at their service and teachers willing to learn them, but beyond putting together a camp-stool no effort has ever been made to acquire a knowledge of the trades. They observe a missionary at work until they observe whether a tire is welded or not, and then pronounce upon its merits with great emphasis, but there their ambition rests satisfied." Of the Makololo, it is said, some make wooden bowls with very nice lids, and since the idea of camp-stools have entered their minds they have shown great taste in the different forms given to the legs of these pieces of furniture.

On the *Architecture* of the inhabitants we extract the following: "The Makololo huts are generally clean while those of the Makalala are infested with vermin. The cleanliness of the former is owing to the habit of frequently smearing the floor with a plaster composed of cow-dung and earth. If we sleept in the tent in some villages the mice ran over our faces and disturbed our sleep, or hungry, prowling dogs would eat our shoes and leave only the soles. When they were guilty of this and other misdemeanors we got the loan of a hut. The best sort of Makololo huts, consists of three circular walls, with small holes as doors, each similar to that in a dog-house, and it is necessary to bend down the body to get in even when on all-fours. The roof is formed of reeds or straight sticks, in shape like a Chinaman's hat, bound firmly together with circular bands, which are lashed with the strong inner bark of the mimosa-tree. When all is prepared except the thatch, it is lifted on the circular wall, the stem resting on a circle of poles, between each of which the third wall is built. The roof is thatched with fine grass and sewed with the same materials as the lashings, and as it projects far beyond the walls and reaches to within four-feet of the ground, the shade is the best to be found in this country. The huts are very cool in the hottest day, but are close and deficient in ventilation by night."

Articles of food that require to be ground are operated on by the women, with a pestle and mortar. The Makololo tribe raise maize, which the women pound into meal in wooden mortars. At several places in the interior Dr. L. noticed some rude efforts at sculpture, the human face cut on pieces of wood; some of the tribes near to

the coast make baskets, while others do something in pottery and iron. Dr. L., however, does not confirm the reports of the existence of tribes in the interior of the continent far advanced in the knowledge of the arts. His account when taken all together makes an impression the very reverse. The deeper the continent is penetrated the less knowledge the natives have of the most rude arts.

ÆSTHETICS, RELIGION, ETC.—With reference to many of the domestic habits of the tribes, the accounts of Dr Livingstone are very satisfactory; the dress of the natives he could not well avoid observing. Both males and females he found in a state of comparative nudity. Most of them wear something on the shoulders and something attached before and behind to a string tied around the waist. Among the Batokas, the women clothe themselves better than the Bolonda, but the men go *in puris naturalibus*, they walk about without the smallest shame. They have even lost the tradition of the "fig-leaf." "I asked a fine large bodied old man if he did not think it would be better to adopt a little covering. He looked with a pitying leer, and laughed with surprise at my thinking him at all indecent, he evidently considered himself above all such weak superstition." The following is an account of the dress of an African Queen living on the Leeba river, and having, as several instances related of her, go to show, a great influence over her people, the Balonda: "Manenko was a tall, strapping woman about twenty, distinguished by a profusion of ornaments and medicines hung around her person; the latter are supposed to act as charms. Her body was smeared all over with a mixture of fat and red ocre as a protection against the weather, a necessary precaution, for like most of the Balonda ladies she was otherwise in a state of frightful nudity. This was not for the want of clothing for being a Chief she might have been as well clad as any of her subjects, but from her peculiar ideas of elegance in dress."

In the valley of the Lowemba the women were found almost entirely naked, "their gowns being a patch of cloth frightfully narrow with no flounces, and nothing could exceed the eagerness with which they proposed to purchase strips of calico." Most of the tribes that live near the settlements, made by Europeans, have had their notions changed with reference to dress. In a climate such as is experienced in the route of Dr. L. across the continent, dress is simply unnecessary. The rays of the sun make no impression on the skin of the native, however much exposed to them. By natural men it seems

things are judged of by their utility. A kind of dress that involves labor and expense is not likely to be held in much esteem. On the Eastern coast, in the Portuguese possessions the small pox got introduced among the slave population some years since, and it was observed that the mortality was the least among the negroes who were in the habit of going naked. If this be true, dress is not even hygienic in Africa. For ornamenting the body, after some fashion or other, Dr. L. noticed almost every where a taste in both sexes. Males often embarrass their walking by the number and size of the rings inserted into the skin about the ankles, while the females often maim themselves aad distort their appearance in obedience to the same passion.

Religion.—From what has been said of the amount of intelligence, the governmental regulations and the inter-minable wars, it could not be expected that any thing approaching a reasonable kind of worship exists in the interior of the country. In only a few localities is there any thing to be found indicating the presence of the rudest forms of idolatry. Paganism, nor Mahomedanism has taken root in the native mind. Many tribes not only never heard, it is said, of the names of those who have been conspicuous in bringing to the attention of mankind the religious systems which have appeared in all ages of the world, but they had never heard until they saw Dr. L. of the existence of the Creator. Among other tribes there seemed to be some idea of a future state, the immortality of the soul, etc. Every where, however, superstition the most degraded and bloody prevails. Speaking of the habits of the Barotse Dr. L. says: "When a chief dies a number of his servants are slaughtered with him to form his company in the other world. * * * This and other customs show them to be genuine negroes, though neither they nor the Balonda resemble clearly the tiypcal form of that people." Leaving the Barotse country, Dr. L. continues: "As we go north the people become more bloodily superstitious. A notion very prevalent is, that after death, the spirit either enters into the body of an inferior animal, or tarries somewhere in the vicinity. To these disembodied spirits, under the name of Barimo, prayers are offered." Whenever Dr. L. undertook to instruct the natives on religious matters he was heard with respect and attention. He complains however, that the effect produced was not very lasting. Sins would be acknowledged, but the penitent would go immediately and sin again. Civilization of the natives—a knowledge of letters and

figures, of *arts* and *sciences*, of the institutions under which enlightened people live, must in the estimation of Dr. Livingstone take precedence of all attempts to teach the Gospel. The axe, saw, hammer and plough, the spelling book and the arithmetic, are of more importance in the hands of the missionary just now than the Bible.

Dietetics.—We have no time to do any thing more than merely to allude to the diet of the people of Africa. So far as it was observed by Dr. L., the natives are neither herbivorous or carnivorous, but like the rest of mankind, omnivorous. Although furnished by Nature with quite a profusion of articles of diet in the vegetable line, the natives partake largely of animal food. The country abounds in a great variety of herbivorous animals, quadrupeds, birds, fish, etc., and these are hunted and slaughtered for food. Dr. L. found, in his own case, that in order to stand the fatigue and labor incident to travel, animal food was absolutely required. He had every reason to believe that the same thing was true with reference to the natives, and hence their universal custom of consuming it when it could be obtained. In the centre of the continent there was no salt, the natives not being accustomed to use salt. While here Dr. L. observed that the use of animal food served in the place of salt. When he and the natives could get plenty of animal food they did not feel the want of salt.

Medicine in South Africa.—Our principal object in looking through the volume before us has been to see the state of Medicine among the natives—what conceptions they have of the diseases to which "flesh is heir," and what they know of remedies—how they use them, etc.

It will be noticed by any one who reads the descriptions given of the tribes, that they, as a rule, enjoy vigorous, robust health. In some districts, it is true, the physical powers are dwarfed from malaria, but such are rather the exceptions. So tenacious are the people of life, that it is said by Dr. L. that no tribe has ever been destroyed by either war or disease. Malignant diseases, such as syphilis, do not get a foot-hold, but, as before remarked, are crushed out by the forces of the physical constitution. Dwarfs are scarce, so are physical deformities. Dr. L. saw but one albino in his travels. Diseases that are connected with imperfect or effeminate powers of the assimulative functions, such as consumption, scrofula, and cancer, very seldom make their appearance. Stone in the bladder and cholera are unknown. The vigorous constitution, and the compar-

tive exemption from diseases, Dr. L. attributes to simplicity of diet and constant exposure of the surface of the body to the atmosphere.

The diseases of Africans proper seem to be very few. Small-pox and measeles passed through the country a number of years since, and committed great ravages. Epidemics, however, are mostly confined to the coast population, and seldom travel inland. From what has been said of the topography and hydrography of the country, we are enabled to understand what of necessity must be the staple diseases. The soil of the coasts, at Londa on the West, and Kilimane on the East, are made up of a large proportion of vegetable matter in a state of decomposition. This is true also of the central basin, and of the valleys of the many noble rivers of the interior. Such localities give rise to fever, visceral inflamations, etc. The Makololo tribe occupy the central basin. "The fever here," says Dr. Livingstone, "is a drawback to this otherwise important missionary field. The great humidity produced by heavy rains and inundations, the exuberent vegetation caused by fervid heat in rich, moist soil, and the prodigious amount of decaying vegetable matter, annually exposed after inundations to the rays of a torrid sun, with a flat surface often covered by forests through which the winds cannot pass, all combine to render the climate far from salubrious for any portion of the human family. But the fever thus caused and rendered virulent, is almost the only disease prevalent in it." The Portugese and other Europeans suffer from fever on the West coast. Some places have been abandoned on account of it. It is almost needless to say that Kilamane is unhealthy. The immense delta of the Zambesi gives out malaria in a very concentrated form. "A man of plethoric habit is sure to get fever, and concerning a stout person one may hear the remark, 'Ah he will not live long; he is sure to die.' At the mouth of the Zambesi, a Hamburgh vessel was lost a short time before Dr. L. arrived at the place. The men who composed the crew were saved from a watery grave; but every one of them, except the captain, died with fever, notwithstanding they were more regular in their habits than English sailors. "They felt *'out of sorts'* only, but gradually became pale, bloodless and emaciated, then weaker and weaker, till at last they sank like oxen bitten by tsetse." The captain was saved by the use of quinine administered by Dr. L., without his knowledge, for he was prejudiced against its use. Some idea may be formed of the influence of the

climate on the white race by what Dr. L. suffered. He states that he had the African fever twenty-seven times ! !

The descriptions given of this *African fever* lead to the supposition that it is closely allied to what we call in this country bilious remittent and intermittent fevers. It may, and no doubt does, differ on account of the climatic influences under which it makes its appearance, but its essential phenomena seem to be much like what we have in our country as the result of malaria. Dr. L. says that repeated attacks of it enlarge the spleen. Besides, quinine he found to be a remedy for it. He cured himself with this drug promptly; he cured the natives also with it.

The office of the doctor in Africa is in the hands of a class who inherit it from their fathers and grand fathers. Those who do not come into the profession in this way are regarded as *quacks*. The regular doctors, it is said, by inheriting the observations of their fathers and closely noticing things themselves, acquire some degree of skill. "The *surgical* knowledge," observes Dr. L., "of the native doctors is rather at a low ebb. No one ever attempted to remove a tumor except by external applications. Those with which the natives are mostly affected are fatty tumors, and as they all have the *vis medicatrix naturae* in remarkable activity I safely removed an immense number. In illustration of their want of surgical knowledge may be mentioned the case of a man who had a tumor the size of a child's head. This was situated on the nape of the neck, and prevented his walking straight. He applied to his chief, and he got some famous strange doctor from the East coast to cure him. He and his assistants attempted to dissolve it by kindling on it a little fire made of a few small pieces of medicinal roots. * * Both men and women submit to an operation without wincing, or any of that shouting which caused young students to faint in the operating theatre. The women pride themselves on their ability to bear pain. * * A man scorns to shed tears."

"Their knowledge of *obstetrics* is equally unscientific, and a medical man going near a woman at her confinement was regarded as being very much out of place. The poor creatures are often placed in a little hut built for the purpose, and left to themselves without any assistance whatever, and the number of umbilical herniæ which are met with in consequence is very great." Dr. L. practiced as an accoucheur only in difficult cases, and thus secured the good will and esteem of the people. Having in a certain instance cured a case

of sterility, he was beset afterwards with numerous applications for the "Child medicine." One would say, "I am getting old; you see here and there gray hairs on my head, and I have no child; you know how Bechuanas (a certain tribe) cast their old wives away; what can I do? I have no child to bring water to me."

The remedies used by the natives are not very numerous; still they have something or other by which they fulfill quite a variety of indications. Cupping for inflammatory diseases is often resorted to by certain tribes. *Goho* is emetic and purgative; it is not so much used as a remedy for sickness, as it is as a test of guilt. Persons accused of witchcraft, theft or other heinous offenses, are required to take a strong decoction of this substance, and if they survive its effects, they are regarded as innocent; it is called the "*Ordeal*" medicine, and from what Dr. L. says of its properties and the number of persons who are annually destroyed by it, it must be very poisonous in large doses. The accused, conscious of being innocent, approach the Ordeal with confidence. *Shinkando*, a very virulent poison, is used by other tribes in their *Ordeal*. *Mupakasi* is used as an antidote to poisons. *Muhundukundu* is a *febrifuge* prescribed in decoction in the same way as quinine; it grows plentifully in the country, and cures intermittent fever. *Kakumati* is also a febrifuge, and used in intermittent fever. *Eskinencia* is used in croup and sore throat. *Itaka* is used to produce diaphoresis in fever; this is brought into the country by the Arabs and sold to the natives at Kilimane. *Mutuva* is used for coughs, cold, etc. *Mudama* is a stringent vermifuge. There are some tribes, north of the Cape colony, on the Leeba and Lecambye rivers, far in the interior, among whom small pox appeared some thirty years ago. "Singularly enough the people used inoculation for this disease, and in one village where they seem to have chosen a malignant case from which to innoculate with, nearly the whole village was cut off.

Circumcision.—"All the Bechuana and Caffre tribes, south of the Zambesi, practice circumcision, but the rites observed are carefully concealed. The initiated alone can approach, but in this town (Bamangoato) I was once a spectator of the second part of the ceremony of the circumcision called '*sechu*' Just at the dawn of day a row of boys of nearly fourteen years of age stood naked in the katla, each having a pair of sandals as shields on his hands. Facing them stood the men of the town in a similar state of nudity, all armed with long thin wands of a tough, strong, supple bush, called moret-

la, and engaged in a dance named koha, in which questions are put to the boys as, 'Will you guard the Chief well? Will you herd the cattle well?' and while the latter give an affirmative response, the men rush forward to them, and each aims a full-weight blow at the back of one of the boys. Shielding himself with the sandals above his head, he causes the supple wand to descend and bend into his back, and every stroke inflicted thus makes the blood squirt out of a wound a foot or eighteen inches long. At the end of the dance, the boys' backs are seamed with wounds and weals, the scars of which remain through life. This is intended to harden the young soldiers and prepare them for the rank of men. After this ceremony, and after killing a rhinoceros, they may marry a wife."

An instrument with which the Lion is hunted, and also used in war, is the *poisoned arrow*. Dr. L. was shown the poison used. "It is the entrails of a caterpillar, called N'gwa, half an inch long. They squeese out these and place them all around the bottom of the barb, and allow the poison to dry in the sun. They are very careful to cleanse the nails after using the poison as a small portion introduced into a scratch acts like morbid matter in dissecting wounds." The Bushmen have the reputation of curing the wounds of the poison. They administer the caterpillar itself in combination with fat. Another poison, used on the arrows, is the milky juice of the Euphorbia. When a quantity of this juice is mixed with the water of a pond, a whole herd of Zebras will fall dead after drinking it before they have moved away two miles. On oxen and man it acts as a drastic purgative.

The practice of these Bushmen, who are about the most degraded tribe in Africa, looks like Homeopathy—caterpillar the disease, caterpillar the remedy. Poor Hahnemann, it seems, has even been anticipated by the natives of Africa.—"*nil novi sub sole.*"

From this brief review of the state of medicine it seems that the natives, either by intuition or experiment, recognize in the substances with which they are surrounded the means of alleviating distress and curing disease. They are not "Expectant" practitioners, believing in Nature as competent to do all the work—but without, as there is reason to believe, knowing any thing correctly of the nature of morbid actions, they use medicines freely and of powerful properties. By accident we discovered the most important article of the materia medica. They likely discovered the remedy for

African fever in the same way. How innoculation for small-pox become known, and who introduced *circumcision* there are no means of ascertaining. After all, medicine in South Africa seems not behind any thing else. Without a knowledge of letters or figures, without agriculture or architecture, without being even acquainted with their own ages, the natives have managed to find out something in regard to the substances that will cure the diseases with which they are most frequently afflicted.

It is refreshing to get hold of a book such as the one before us. It increases our knowledge of the Earth and of its inhabitants. It may be said that there is little in it calculated for the medical profession. This remark ought not be made. Whatever pertains to natural history has a bearing directly or remotely on the medical profession. Every portion of the Earth—its geography, hydrography, geology, botany and zoology, ought to interest the medical man; for it is only in the contemplation of things on an enlarged scale, and with reference to circumstances, that correct notions can be formed. A country by these travels is opened up of great extent, having a conformation, and possessed of agricultural resources, that must strike the uninitiated with perfect surprise. Upon it herds of tropical animals, in numbers that stagger credulity, feed upon a vegetation which for luxuriance has no parallel upon the earth. Upon the country the Sun never ceases to bend his warm and genial rays—no winter scarcely, but an eternal spring. Thus circumstanced we have a race of mankind, marked by the peculiarities of the circumstances with which they are surrounded. A dark skin, thick lips, prognathous skull, and elongation of the os calcis, distinguish them from other races. They wear no clothing, because they need none; they give themselves but little trouble about art or agriculture, because the earth produces, without being teased to it, an abundance of food; they have not science enough to reckon their own ages or the distances from place to place, but measure time by the generations that have lived; they cultivate war with each other as an institution, and their greatest ambition is to be good warriors; they are superstitious in regard to every thing they can not readily comprehend; they cannot be said to be religious, for no efforts in this line have been successful; they have their diseases, medical and surgical, and they have their doctors to cure them; their moral sense does not prevent them from murdering each other, from holding each other as slaves, or from selling each other to slave-traders;

they have good feelings toward white men who go among them for the purpose of ameliorating their condition; they were charmed with Dr. L. because they regarded him as a wise, good man, who came among them with good intentions.

The success of Dr. L. as a traveler in Africa we regard as being mostly due to the circumstance that he secured, at the start, an escort of able bodied men from the chief of the Makololo tribe. The many times his life was endangered by the tribes through whose territory he passed, and who knew nothing of his objects, renders it morally certain that without this escort he would have shared the same fate as Mungo Park on the Niger. Besides, it was his almost universal practice when entering the territory of the tribes, from whom hostility were apprehended, to send forward a conciliatory message to the chiefs, thus testing in advance the practicability of progress.

Throughout the volume the impression is made, that S. Africa is capable of receiving the impress of European Civilization. This involves two questions—the capability of the natives, and the character of the climate. Without any kind of doubt the natives are capable of intellectual and moral improvement. Whether, however, they can be sufficiently elevated, with their circumstances, to appreciate a high order of civilization is among the problems that have yet to be solved. Were they compelled to work one-half of the year to get food, and raiment for the other half, the probabilities in their favor would be increased. The climate is mortiferous to the white race. This seems to be rendered certain by all the experiments made. The Author suffered in his own person twenty-seven attacks of fever. The Portuguese colonies at Londa, and in Mozambique, are sickly after having been in existence for centuries. Europeans as we have seen, in the case of the Hamburgh vessel wrecked near Kilamane on the East Coast, die in being detained for a short time there. The labor, therefore, of getting up a civilization for this part of Africa and of carrying it on must be performed by Africans themselves. The presence of the rite of circumcision among certain tribes in Mozambique shows that the Jews have succeeded to some extent with their religion. The rite, however, seems so distorted now that it would not likely be acknowledged as valid by an Israelite.

ART. II.—*Case of Hæmaturia, resulting in Uraemi and Death.* By J. HOUSTON, Jamestown, Ohio.

I was called Sunday, A. M., July 19, 1857, to see E. W——m, aged fifty years, of nervo-billious temperament; found him suffering acute pain in the right lumbar region, extending along the course of the ureter; pain continuous, pulse one hundred, small and hard, frequent vomiting, tongue dry and slightly red at the edges, constant thirst, profuse perspiration of the face and chest, with cold extremities. The urine of a dark red color perfectly neutral, imparting a red stain to white linen, and on the application of heat a coaglum was formed. The quantity of the discharge varied but little from a healthy standard. These symptoms continued without any remission for twenty-four hours, when the pain subsided the stomach became more quiet, the thirst less urgent, the pulse reduced to ninety, and a more even and natural temperature pervaded the whole surface. There remained a slight fulness and tenderness of the affected side, extending from the spine to the regio pubis, rendering an effort to assume either the erect or recumbent position exceedingly painful. This tenderness continued to gradually subside for three days, after which time it attracted no further attention.

Thursday 23. The patient expressed himself as feeling quite comfortable; has a good appetite, but occasionally vomits after taking nourishment; bowels regular; continued to walk about his room up to Sunday 26, when he became drowsy and listless, slight spasmodic contractions of the muscles of the face was observed, his respiration abnormally slow, (twelve inspirations to the minute,) pulse ninety; urine unchanged in appearance, and on examination under the microscope was found to contain a large proportion of blood corpuscles. This you will remember, was his condition on Monday 27th,

Tuesday 28. No change in the symptoms worthy of notice.

Wednesday 29, 4 o'clock A. M. Suddenly seized with a most terrific convulsion, followed by four hours of profound coma; this was again succeeded by an exhilaration of spirits, manifested by an inordinate desire to converse, and a hurried anxiety to close up his business matters, being fully impressed of his approaching dissolution, and at the same time retaining full possession of his intellectual fac-

ulties. The spasms continued to recur at intervals of from nine to twelve hours, up to Friday 31st, each spasm followed by profound coma of from two to six hours duration, during which time he could not be aroused; his breathing was stertorous and still more prolonged from three to six inspirations to the minute, and frequently forty seconds would elapse between the respiratory movements. After a period varying as before mentioned, he would suddenly arouse and after a few incoherent remarks become perfectly rational, and converse as freely and cheerfully as he had formerly done; these extremes of depression and excitement of the nervous centres invariably succeeded each other, during the continuance of the spasms the discharge from the kidney much diminished. As to follow the history of the case from day to day, would be a repetition. Suffice it to say, that from Friday, 31 P. M., there was frequent spasmodic contractions of some of the muscles of voluntary motion, but no general spasm. The urine lost its dark red color, but still contained blood corpuscles in great profusion, and numerous casts of tubes was beautifully displayed under the microscope, the coma become more constant, up to Tuesday, August 4, when he died.

To remark upon this case, deprived as we are, of those great and important land marks that a post mortem inspection affords, would be mere speculation, at least so far as the pathological characters are concerned.

Did the hemorrhage proceed from the kidney? We are of the opinion that the symptoms favor an affirmative answer to this inquiry; first from the character and appearance of the discharge, it being a perfect mixture or ferment of blood and urine of a dark red color, the whole discharge presenting a uniform appearance while flowing from the urethra, undergoing no change in this respect, after remaining quiet.

Another but a negative reason for this opinion is the absence of irritation in the other parts of the system of organs, endowed as they are with a higher degree of sensibility, and occupying a more superficial position than the kidneys.

Whether the hemorrhage was a primary affection, or the result of an organic disease, or proceeded from a calculus, nothing I presume but a dissection can reveal.

Taking the history and symptoms of this case into consideration, the conclusion seems fair that death resulted from a deficient elimination of urea from the blood. Yet when we take into account the amount of the discharge from the kidneys (a portion of which was undoubtedly urine,) it would seem that there was not a sufficient relation between the violence of the symptoms, and the amount of urine retained in the blood, to account for the former. But by adopting the theory, that in uræmia a new substance is formed at the expense of the normal constituents of the urine, which is the real poisonous agent, the difficulty vanishes; but finally to what extent was the retention of urea in the blood influenced by the loss of vigor consequent upon the loss of blood?

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

From the N. O. Medical and Surgical Journal.

Influence of Anatomy on the March of Civilization: By J. C. Nott, M. D., Professor of Anatomy in the University of Louisiana.

The science of medicine is so widely separated from the range of thought of the great mass of mankind, (even of those who have been liberally educated) that few, out of our profession, have any proper appreciation of the intimate connection which exists between its various branches and other departments of human knowledge, and a still smaller number have any idea of the immense influence the medical profession has exercised on the march of civilization. Could the people and their legislators be made fully sensible of the truths I propose to set forth, they would not hesitate to award to medical colleges, the credit which they justly merit. Few States in the Union have fostered these institutions with such liberal hands as that of Louisiana, and yet her people are already feeling benefits which will increase from year to year. But my object now is not simply to show that we are elevating the standard of medical education from year to year, and supplying the population with more intelligent and more skilful physicians, but that while we place the science of medicine on a more elevated platform, we, at the same time, elevate all other departments of knowledge with it. As my

space will not permit allusion to other departments of medical education, as chemistry, botany, etc., I shall confine my illustrations simply to that of Anatomy, to which too little importance is attached by those outside of our profession, and I might add with truth, by too many in the profession.

So legitimately are all the departments of human knowledge connected together, that it becomes very difficult to estimate the full value of any one, or its influence on others, however disconnected they may seem. It may, however, be safely asserted that there exists no science, or no department of knowledge so isolated, that it does not receive light direct or indirect from others.

It may be laid down as an axiom, that *all knowledge is derived from the study of nature.* The mind of man comes into the world a blank, and would remain so were it cut off from the observation and study of objects of nature. Locke, in his immortal work on the understanding was the first to develope fully the great truth that all knowledge comes through our senses, for though the mind in its progress may develop certain abstract ideas, even these, if closely analyzed, will be found to have their ground work in ideas received through the senses. Imagine a man who had never *seen* an object in nature—who had never heard a sound—who had never felt, smelt or tasted, and ask what abstract ideas his mind could originate, that would possess form or value. In fact, all our knowledge is the result of the action of our minds on materials derived from observation of the objects and phenomena of the external world. The boasted mind of man can *invent* nothing but *falsehood*—all science—all knowledge is but the discovery of facts of nature and their relations. What, for example, is the noble science of astronomy? It is no *invention* of man. The master minds of Newton, Kepler, Laplace, Herschel, Leverier and others, have but *discovered* a few of the laws which have governed the celestial bodies for millions of years. So with mathematics, natural philosophy, botony, zoology, geology, chemistry, anatomy, etc.

Every proposition in Euclid is based on a law of nature. It was not Euclid that made the right angle of a triangle equal to the sum of the other two angles—or the square of the hypothenuse equal to the sum of the squares of the other two sides. When the chemist tells us that all substances in nature may be resolved into some sixty simple elements—that these may be recombined to form well known inorganic compounds; and that they combine in certain definite proportions, he only proclaims *discoveries* of beautiful laws of nature.

How stands the case with our own science of medicine? What are we daily striving at? Is it not simply to extend our *discoveries*? We seek with the dissecting knife and microscope to extend our knowledge of the structure of the human body. We seek to extend our knowledge of its functions, and the action of morbid causes upon it; and we seek in the vegetable and mineral kingdoms for remedies to heal its maladies. Every new splint the surgeon shapes, or new instrument he brings to light, is but an appliance to carry out a mechanical principle which exists in nature.

We may then, I think, fairly assume the truth of the two propositions thus briefly alluded to: First, That the mind of man commences its existence in darkness, and would remain so, were it not for the perceptions received through the five senses, which places us in relation with the external world. Second, All our knowledge is derived from the observation of nature, and the operation of our minds upon ideas so obtained.

If, then, it be true that the mind of man is enlightened and expanded by the study of nature, it is evident that the wide field covered by the science of anatomy must yield the richest of all harvests, and one well worthy of the great minds of Cuvier, Palas, Blainville, Geoffroy, St. Hilaire, Agassiz, John Hunter, Owen, Leidy, and many others, who have not only widely extended the horizon of speculative, but of useful knowledge.

You must not commit the grave error of thinking that the science of anatomy belongs to the doctor's shop alone. On the contrary, anatomy in its more general and philosophic acceptation, is the *Science of Organization*, considered in the different living beings, from the simplest zoophyte up to man. The series of organized beings, forms an immense chain, the extent of which the accumulated labors of ages has not been able to measure. The air, the earth, the mighty deep are all populated by living beings, which, by their infinite variety of organization, form and size, attest the inexhaustible fecundity of nature. Thus while among the mammiffers life is maintained by the most complicated apparatus, we find at the other end of the scale, animals, like the hydra, polyps, etc., which have been alternately ranged with animals and vegetables. Nor are the varieties in size less striking, ranging from the mammoth or whale down to the animalculæ, a million of which the microscope discovers in a single drop of water. Even the animalculæ, so infinitely small to our senses, may in turn become gigantic, compared to others yet to be discovered with more perfect instruments.

You at once perceive then that anatomy is the most vast of all sciences—far too vast for any one mind. Hence the necessity of dividing it up into many departments, any one of which may fully occupy the lifetime of one man.

We shall proceed to point out in succession, the connection between anatomy and a few of the more prominent departments of human knowledge, viz: mental philosophy, fine arts, zoology, geology, jurisprudence, political economy, ethnology, natural and revealed religion, etc.

1st. Let us inquire what connection exists between anatomy and mental philosophy? Science is one thing— religion is another, and should in the present sensitive state of the public mind, be kept as much apart as possible, and it is not our desire here to make any allusion to the soul, or immortal part of man; but the *mind*, the *intellectual powers*, are clearly functions of that organ called the brain, and we should commence our study of the mind, by the *anatomical* structure of the organ from which it emanates. The mind is

almost null in the new born infant—it grows and gains strength on to mature age—it is deranged by disease of the brain, and is annihilated by compression and other injuries. Every thing, then, proves that its intellectual functions depend upon the integrity of the anatomical structure of the *brain.*

The metaphysician who attempts to investigate thought, and to decompose the complicated operations of the understanding, can make no solid progress without laying his ground work in the structure, and functions of the various parts of the brain, organs of sense, and spinal system. The leading mental philosophers of the past age were fully sensible of the importance of anatomy, and Descartes, Locke, Malebranche, Condillac and others, were versed in the anatomy and took it as their point of departure. But it is to the labors of Gall, and those who have followed in his footsteps, that we are mainly indebted for our advance in mental philosophy. While on the one hand, I do not mean to say that the present state of our knowledge justifies us in mapping out the faculties of the brain on its surface, as Gall has done, still the merit cannot be denied him, of having given a new impetus and better direction to the study of mental philosophy. He has at least clearly proven, that certain grand divisions of the brain, preside over certain groups of functions —the anterior—the posterior parts of the brain—the cerebellum—and the medulla oblongata; although their functions are not all clearly defined, yet differ widely in those they perform. And not less important are the great discoveries of Sir Charles Bell, of the functions of the spinal marrow, and its system of nerves. A familiar illustration of all this may be given in the organs of sense—the eye —the ear—olfactory organ—the tongue, have each a nerve leading to and connected with a point of the brain, and each has a distinct function to perform; did the optic nerve connect with the brain at the point of origin of the auditory nerve, there would be no vision, and *vice versa* of the auditory nerve; it is clear, then, that one point of the brain gives sight, another hearing, another smell, another taste, etc., showing clearly that the brain is a compound organ, having many functions to perform.

And here comes in the great science of comparative anatomy, to show how indispensable it is to the proper understanding of man, and to illustrate the remark of Buffon, that if "no other animal than man had lived, we should know much less of man than we do."

In fact, most of our knowledge of the functions of the nervous system of man, has been derived from the dissection of animals. Now man belongs to that division of the animal kingdom to which the term *vertebrata* has been assigned by the naturalists. The leading characteristic of this division is found in the existence of a brain, spinal marrow, and vertebral column. The vertebrata have been subdivided into mammiffers, birds, reptiles and fishes, all of whom have a brain and spinal marrow.

Anatomy teaches us that man possesses the most complicated and perfect nervous system known, and by following the chain on down-

wards through the mammalia, birds, reptiles and fishes, we find that the brain becomes smaller and less perfect, one organ after another is diminished or left out, until in the lowest links but little brain and little intelligence is left. If we pass on from the *Vertebrata*, through the three remaining divisions of the animal kingdom, viz: *Articulata*, the *Mollusca*, and the *Radiata*, we shall find that not only the brain, but the entire nervous system disappear, and even the special organs of sense.

It is by anatomy, then, that the mental philosopher has been able to study and analyse the structure and functions of the nervous system. He can go back and commence almost at the worm, and by following on the chain upwards through fishes, reptiles, insects, and warm-blooded animals, discover that one organ after another is added, each of which has its special use, until he reaches such structures as the brains of Napoleon, Newton and Locke.

I have pointed out to you one of the great results of comparative anatomy. It is the ground work of mental philosophy, and no intellect, however gigantic, could ever trace the connection between mind and matter, without the dissecting knife and microscope.

Even sculpture and painting, those twin arts, that so charm the eye, refine the taste, and expand the mind of man, are not less indebted to the aid of anatomy for the high perfection to which they have attained in our day. A certain amount of anatomical instruction is now considered as essential in every school of design. What excellence could the historical painter attain, without a knowledge of those muscles of the face which give expression to the various passions and emotions of the mind; or of those of the limbs and trunk which give expression to the motions and attitudes of living man? The most beautiful object in nature to us, is the human form divine; who can gaze upon the Apollo or the Venus, the Laocoon, or the dying Gladiator, without the most pleasurable emotion; and they give us pleasure because they are true to nature. It may be said that the sculptors who produced these unrivalled works of art, lived in a day when dissections were not tolerated, and anatomy was in its infancy. In reply, we say, that we do not know with certainty even the names of many of the artists, and therefore can know little of their knowledge of anatomy; but we can say, whether they did or did not dissect, they studied the external anatomy of man with a fidelity which never can be surpassed; the swell and outline of every muscle, the eminences and depressions of every bone, the motions of every joint, every trivial furrow, every superficial blood vessel, or tendon, the irregularites of the skull, etc., were all depicted with a fidelity which can never be excelled. No one, then, will deny that anatomy is an essential element in the education of the sculptor and painter.

Need I now address myself to the intelligent jurist and ask him to turn to Paris and Fontblanque, Beck, Taylor, and other works on Medical Jurisprudence, and say how much he owes to the labor of the anatomist, to say nothing of medical chemistry? How often is

the anatomist called before the coroner, or into courts of justice to determine a point of life and death. Questions of infanticide have often to be decided by the testimony of the medical man alone; in cases of death arising from blows, wounds, etc., it is the anatomist who is to decide, and upon his testimony alone, hangs, in many instances, the lives of human beings, and the momentous decisions of damning guilt or of innocence. But it would be almost an insult to intelligence to dwell upon a point so palpable as this.

Where shall I begin, or where shall I end, when I undertake to tell you of the connection between anatomy and the vast science of *Zoology?* What is meant by the term *Zoology?* It covers the entire physical history of every living being, and every fossil remain, from the animalculæ or zoopyhte up to the most gigantic animal forms. Zoology, then, must necessarily have comparative anatomy for its ground work. Comparative anatomy not only examines into the minute structure of each organized species, but it is its province to compare them together, to study their affinities or discordances, to arrange them into groups having anatomical relation, and to open to our view that stupendous plan by which an All-wise Providence has populated and repopulated our globe. We have only to turn back to the works of Buffon to prove how indispensable is anatomy to the science of zoology. Buffon was truly a great and useful man in his way, and to the charm which his genius threw around Natural History, are we greatly indebted for the impetus given to its study during the past century. No man was ever more deeply impressed with the grandeur and beauty of Nature's works; no man ever searched more diligently for landmarks by which to classify and arrange the immense mass of material over which his mind wandered; and never did gorgeous and attractive style do more in awakening the attention of others to the study of Nature's works; but after all there was something wanting to give solidity and durability to his plan, and to elevate Natural History to the level of a true science. It was the want of *anatomy.*

When the naturalist of our day looks over the fifty volumes of Buffon, he marvels at the extent of his labor; is fascinated with his beautiful descriptions of the external forms of animals, their habits, instincts, geographical distribution, etc.; but when we seek for those solid materials out of which to construct an exact science, we turn to the labors of Daubenton, the modest, but gifted collaborateur of Buffon, who has left us dissections of nearly two hundred species of animals, so full and accurate as to leave nothing to be desired, as far as these details extended, but Daubenton attempted no complete classification of the animal kingdom.

Comparative anatomy, by leading us to an exact appreciation of the organic resemblances and differences presented by all animals, is now regarded as the sole solid basis of their classification.

It is to Cuvier that we are indebted for the first truly scientific classification of the animal kingdom, which is founded on the organization, and the principle of natural anatomical affinities. It follows

the descending order, beginning with the most complex type at the summit, and placing the most simple at the bottom of the scale. He divides all known animals into two grand anatomical divisions, viz: the *Vertebrata*, or those having a spinal column, and second, the *Invertebrata*, or those having no spinal column. The latter are again divided into *Articulata*, *Mollusca*, and *Radiata*, and the whole animal kingdom is thus divided into four grand departments, which are based entirely on anatomical distinctions. If we go on down through the orders, classes, families, generations and species, we find that anatomy is still our guide, and the only means by which we can surely place each animal. It is only when well marked anatomical distinctions cease, that our doubts and disputes commence.

When, for example, you place beside each other, a bear and a dog, you discover anatomical differences which at once point to specific difference and distinct origin. But when you place beside each other the dog, wolf, fox and jackal, though they have some external differences, their anatomical structure is identical—they have the same number and form of teeth, the same number and form of bones in the skeleton, and the same internal organs; but, the comparative anatomist requires but a single bone or tooth of the bear to say that it is not a dog, or a wolf, or deer—but a bear, and nothing but a bear.

If the question be asked, "Are all horses of one species or origin?—are all dogs—all cattle—all our domestic sheep and goats of one species—nay, more, are all the races of men of one species? We are at sea without a compass. Anatomy ceases to guide us, and it is probable that such disputes will never be settled.

And what shall I say of the noble science of Geology, which strives to know the chronology and formation of the globe? It goes hand in hand with comparative anatomy, like sculpture with painting—in fact, organic remains are the hand-writing of the Almighty upon stone, by which he has revealed to the geologist all that we know of Preadamite history of the Earth, and it is to the anatomical labor of the immortal Cuvier, that we are indebted for our most important geological knowledge.

The following quotations, from the work of Professor Hitchcock, on "Geology and Religion," in allusion to the fossil remains of extinct animals, will give some idea of the intimate and extensive connection between comparative anatomy and geology. "The fossiliferous rocks," says he, "or such as contain animals and plants, are not less than *six or seven miles in perpendicular thickness*, and are composed of hundreds of alternating layers of different kinds, all of which appear to have been deposited, just as rocks are now forming, at the bottom of lakes and seas; and hence their deposition must have occupied an immense period of time. Even if we admit that this deposition went on in particular places much faster than at present, a variety of facts forbids the supposition that this was the general mode of their formation.

"The remains of animals and plants found in the earth are not mingled confusedly together, but are found arranged, for the most

part, in as much order as the drawers of a well regulated cabinet. In general, they appear to have lived and died on or near the spots where they are now found; and as countless millions of these remains are often found piled together, so as to form almost entire mountains, the periods requisite for their formation must have been immensely long.

"Still further confirmation of the same important principle, is found in the well established fact, that there have been upon the globe, *previous to the existing races, not less than five distinct periods of organized existence;* that is, five great groups of animals and plants, so completely independent, that no species whatever is found in more than one of them, have lived and successively passed away, before the creation of the races that now occupy the surface. Other standard writers make the number of these periods of existence as many as twelve. Comparative anatomy testifies, that so unlike in structure were these different groups, that they could not have co-existed in the same climate and other external circumstances.

"There are abundant facts to prove that the climate of the whole globe was warm or even warmer than the tropics of our day, and the slow change from warmer to colder, appears to have been the chief cause of the successive destruction of the different races; and new ones were created, better adapted to the altered condition of the globe; and yet each group seems to have occupied the globe through a period of great length, so that we here have another evidence of the vast cycles of time that must have rolled away even since the earth became habitable.

"Among the thirty thousand species of animals and plants found in the rocks, very few living species have been detected; and even those few occur in the most recent rocks, while in the secondary group, not less than six miles thick, not a single species now on the globe has been discovered. Hence the present races did not exist till after those in the secondary rocks had died."

Another very curious result of anatomical investigations is the fact, "*that the laws of anatomy have always been the same since organic structures began to exist.*"

"It has long been known that the organs of animals were beautifully adapted to perform the functions for which they were intended. But it was not till the investigations of Baron Cuvier, within the last half century that it was known how mathematically exact is the *relation* between the different parts of the animal frame, nor how precise are the laws of variation in the different species, by which they are fitted to different elements, climates, and food. It is now well known that each animal structure contains a perfect system of *correllation*, and yet the whole forms a harmonious part of the entire animal system of the globe.

To use the language of Cuvier: "Every organized individual," says he, "forms an entire system of its own, all parts of which mutually correspond, and concur to produce a certain definite purpose, by reciprocal action, or by combining towards the same end. Hence, none of these separate parts can change their forms without a cor-

responding change in the other parts of the same animal, and consequently each of these parts to which it has belonged. Thus, if the viscera of any animal are so organized as only to be fitted for the digestion of recent flesh, it is also requisite that the jaws should be so constructed as to fit them for devouring prey; the claws must be constructed for seizing and tearing it to pieces; the teeth for cutting and dividing its flesh; the entire system of the limbs, or organs of motion, for pursuing and overtaking it; and the organs of sense for discovering it at a distance. Nature must also have endowed the brain of the animal with sufficient instinct for concealing itself, and laying plans to catch its necessary victims." This is the picture of a carnivorous animal, and the same adaptation of structure and instincts to mode of life will be found in the herbiverous and all others, large or small, perfectly or imperfectly organized. "Hence," says Cuvier, "any one who observes merely the print of a cloven hoof, may conclude that it has been left by a ruminant animal, and regard the conclusion as equally certain with any other in physics or in morals. Consequently, the single foot mark clearly indicates to the observer the forms of the teeth, of all the leg bones, thighs, shoulders, and of the trunk of the body of the animal which left the mark.

"By thus employing the method of observation, where theory is no longer able to direct our views, we procure astonishing results. The *smallest fragment of bone*, even the most apparently insignificant apophysis, possesses a fixed and determinate character relative to the class, order or genus and species of the animal to which it belonged; insomuch, that when we find merely the extremity of a well preserved bone, we are able, by a careful examination, assisted by analogy and exact comparison, to determine the species to which it once belonged, as certainly as if we had the whole animal before us.

Cuvier first fully tested this law of correllation of parts, in existing animals, but it remained for him to apply the same principles to remains of fossil animals. It was certain that if the laws of anatomical structure were the same in the pre-Adamite creations, as they are now, the above principles must apply equally well to the bones found in the rocks, and though often only scattered fragments are brought to light, the anatomist would be able to *re-construct* the whole animal, and present him to our view.

The quarries around Paris had furnished a vast number of bones of strange animals, and these had been thrown promiscuously into the collections of the city. Cuvier determined here to put his principles to the test amidst this huge and confused mass of fossil remains. "I found myself," says he, "as if placed in a charnel house, surrounded by mutilated fragments of many hundred skeletons, of more than twenty kinds of animals, piled confusedly around me. The task assigned me was to restore them all to their original position. At the command of *comparative anatomy*, every bone, and every fragment of a bone resumed its place. I cannot find words to express the pleasure I experienced in seeing, as I discovered one

character, how all the consequences which I predicted from it were successively confirmed; the feet were found in accordance with the characters announced by the teeth; the teeth in harmony with those indicated beforehand by the feet; the bones of the legs and thighs, and every connecting portion of the extremities, were found to set together precisely as I had arranged them, before my conjectures were verified by the discovery of the parts entire; in short, each species was, as it were, re-constructed from a single one of its component elements."

Here, then, we have demonstrated, by the light of anatomy, that the same laws of life which now prevail in the world, have existed through a succession of creations, through thousands, tens of thousands, and probably millions of years.

Organic remains, too, teach us that there have been, in the remotest geological epochs, viviparous as well as oviparous creatures, and gemmiparous as well as fissiparous animals and plants. They were also carnivorous, herbivorous, and omniverous animals; they possess the same internal organs as animals of our day and they were governed by the same physiological laws as those of the present day.

What a wonderful achievement it is for anatomy, that it should thus have exhausted the existing Fauna of the earth, and have followed up, step by step, the foot-prints of the Almighty, through this plan so vast in time, so gigantic in extent, and so infinite in wisdom!

Nor is anatomy without intimate connections with both natural and revealed religion. Of the latter, I have not time or inclination to speak here; but what need is there of volumes on natural religion with facts before us like those I have presented. No sane man could follow this long chain of organized beings through creation after creation, through those countless ages of time, could reflect on that plan which has been working with such harmony from beginning to end, and doubt there is a Supreme and Overruling Intelligence, and that we are responsible to him, and him alone, for our acts in this world.

Had we time, I could easily show you to what extent even physics are indebted to anatomy. The human frame is a beautiful machine, from which the mechanic arts have received many useful lessons. It is a system of levers, fulcrums, pulleys, admirably arranged for motion and strength. The celebrated Kipler devoted much study to the structure of the eye. It suggested to the mind of Euler the possibility of achromatic lenses, and the whole science of optics has gained much from the study of the eye. Of like importance has been the anatomy of the ear, on which is based the science of acoustics.

I will conclude by calling your attention for a few moments, to one point more, and not the least important, viz: the connection between anatomy and ethnology.

When we cast our eyes over the broad surface of the globe, and behold the endless variety of human beings which inhabit it, of every shade of complexion, of the most opposite physical conformation,

and of the most diverse moral and intellectual characters; I say, when we look upon all this, in spite of the influence of early education, we are driven to ask ourselves the question, "Are these races of men of one parentage, and are they alike capable of moral and intellectual cultivation?" The *origin of man* is a momentous question, one which has elicited much discussion among the wisest heads, and is one which I shall not touch here; but still the physical history of man has certain important connections with the view of anatomy I am now placing before you, which render it impossible for me to pass it by in silence, without doing manifest injustice to the science of anatomy, which it is my duty to teach.

Of the precise epoch at which man was placed on the earth, we know nothing. The short chronology of Archbishop Usher, of six thousand years, is now abandoned by every well informed writer in the church and out of the church; it may be ten thousand, twenty thousand, or one hundred thousand for aught we know. Nor can we divine how far back such well marked races as Jews, and other white races; Negroes, Mongols, Hottentots, Australians, Indians, Malays, etc., etc., first made their appearance. This much, however, has been positively demonstrated through evidence derived from Egyptian, Assyrian, and Chinese monuments and records, viz, that the Jews and other white races, as well as Negroes, Egyptians, Mongols and other well marked types of man existed at least five thousand years ago as distinct from each other as they now are; and it is equally certain that these forms have, during this long period, been permanent and unchanged by climate or other existing physical causes; no race during this time has been transformed into another, whatever miracles may have been performed in earlier ages.

We not only have evidence of the existence of distinct races from the Bible, Homer, Herodotus and other early writings, but we have actual portraits of races, on the monuments of Nineveh, Babylon, and Egypt, dating back several thousand years. Nay, more, if all this were not sufficient, we have other overwhelming evidence of the antiquity of races. We have the mummies of Negroes, Jews, and other races taken from the ancient catacombs of Egypt, which place the question at once in the hands of the anatomist. We have other human remains from the barrows of Britain and Germany, from the mounds of America, from the ancient burying grounds of Mexico and Peru, from the ruins of Nineveh, from the bone caverns and other sources, all of which give to the anatomist ample material for proving the *permanency* of types through all known physical influences, and all known time.

When these different races of men are brought together and compared *anatomically* they are found to differ quite as widely in structure, as do the species in most of the genera of animals. Compare, for example, the skeletons of the African Negro, and the Anglo-Saxon, and I do not hesitate to assert that they differ as much as those of the polar and tropical bears—the horse and the ass—the

dog and the jackal, or the lion and tiger; but we shall call your attention to but one anatomical point by way of illustration. I will select the brain, as it is the organ of intelligence, which should form the most striking and satisfactory point of distinction.

The lamented Dr. Morton, of Philadelphia, who has done more in this department of anatomy than any other man, collected and measured accurately more than one thousand skulls of various races. Since his death, his collection, which has been deposited in the Academy of Sciences, of Philadelphia, has been considerably extended, and has been re-measured by Dr. Meigs, with the same results. It has thus been ascertained that not only do the races show a great variety of forms in the external configuration of the skull, but a marked difference in the size of the brain If we compare together the two extremes, viz.: the Teutonic and North European races below the Arctic, with the Hottentot of the Cape of Good Hope and the Australian, we find the former have seventeen cubic inches more of brain than the latter; if then we take the Mongol races, the Malays, the Negroes of tropical Africa, the American Indians, and other races, we shall find that there exists a gradation between the two extremes, and that anatomy assigns to each its proper position in the scale.

Nor is it less certain that the large-headed, fair-skinned races have been the rulers of the world and the depositaries of all true civilization. The Mongal races, who have brains intermediate in size between the white and black races, have long since achieved a semi-civilization beyond which they cannot rise: while the intellects of the darker races have remained as dark as their complexions. From the Barbary States to the Cape, no race has ever invented an alphabet—no manuscript or tablets have been found to tell their rude history, and no architectural remain has been found to mark a bright spot on the five thousand years, during which we know they have existed.

Now, *when* did this great inequality of the races begin? Of this we know nothing, but the great practical fact remains that it has existed for several thousand years, and we have every reason to believe that it will remain till these races are extinct. We have shown that both anatomy and history prove that the physical cause now in operation on earth has not been able to transform one type into another.

There are well meaning philanthropists who talk to us about the influence in education and sing hosannahs over the wonderful results which are flowing from the colony of Liberia, and the efforts of Missionaries in civilizing these inferior races. Anatomy teaches us that it is impossible, as history has before done, until you can fall upon some plan by which seventeen cubic inches of brain can be added to that of the Hottentot, the Bushman, or the Australian, you cannot add to his intellect, or his capacity for civilization. I have examined this question with a great deal of care, and can find no facts, or evidence whatever to show that education can enlarge the

brain. We know that the muscles of the arm of the blacksmith will enlarge by the constant use of the hammer, but when did thought ever increase the size of the brain, any more than vision does that of the eye, or hearing the nerve of the ear? There is no analogy between the actions and functions of the nervous system, and those of the muscular system.

The brains of royal families—of nobility, which have been educated classes for centuries, have no larger heads than the lower classes. Educated communities have no advantage in this respect, over the uneducated. The ancient Britons and Germans had the same skulls as their more civilized descendants. The heads of Napoleon, Newton, Shakespeare and Locke were as large at the age of sixteen as at fifty. In a word, there is no more evidence to prove that you can change the size and form of head in a race, than that you can change the form of a negro's foot, his pelvis, his thick lips and nose, his black skin and wooly hair. These are anatomical peculiarities stamped on him by his maker at some time unknown to us, and nothing short of the miraculous interference of the same power can change his anatomical structure. Anatomy thus teaches us a great practical fact and one which should be well understood, by the statesman, the philanthropist and the theologian. We must take the works of God as we find them, and not suffer ourselves to be misguided by Utopian schemes. As Knox quaintly said, you can not change an Irishman into an Englishman by act of parliament.

But it is time that I should draw this rambling essay to a close. The subject is sufficiently extensive for volumes, and if I have succeeded in directing thought to the value of anatomical studies my aim is fully met.

It must be clear to any one who takes the trouble to investigate the subject, that anatomy has, from the time of Aristotle to the present day, exercised a controlling influence over many departments of human knowledge, over the progress of civilization.

Read the history of the world and you will find that medical colleges have ever been the foci around which have clustered the whole circle of natural sciences.

Clinical Instruction in Great Britain.

From the *Edinburg Medical Journal* for October 1857, we condense the requirements in regard to clinical instruction, of the various licencing boards of the United Kingdom of Great Britain, which are authorized to confer the privilege of practicing medicine and surgery in that realm. This instruction is attended during the last two years of the student's pupilage. Usually a clinical lecture on medicine, and one on surgery are delivered each week, and an hour each day is spent in the medical and another in the surgical wards of a hospital during the course.

The Edinburgh University, for the degree of M. D. requires *three months* attendance upon lectures on clinical surgery, *six months* upon lectures on clinical medicine, and *twelve months* attendance in the wards of the Medical Hospital.

The University of Glasgow, for the same degree, requires *twenty-four months* attendance upon a medical hospital, *twenty-four months* upon lectures on clinical medicine, and the same amount of time devoted to attendance upon a surgical hospital, and upon lectures on clinical surgery.

The University of Aberdeen requires *six months* attendance on lectures on clinical medicine, *three months* clinical surgery, *twenty-four months* in a medical hospital, and the same time in a surgical hospital.

The University of St. Andrews requires *six months* attendance of lectures on clinical medicine, and the same on clinical surgery, and *twenty-four months* attendance in a medical and the same in a surgical hospital.

The London University requires for its full medical degree, that the candidate should have attended *twelve months* on each of the four courses of clinical instruction, viz: clinical medicine, clinical surgery, medical hospital, and surgical hospital.

The Dublin University requires, for the lowest degree of M. D., *nine months* attendance upon clinical medicine; and for the surgical diploma *twenty-seven months* upon each of the courses, medical hospital, clinical medicine, surgical hospital, and clinical surgery.

The Queen's University, of Ireland, requires for the first degree, *six months* attendance on each of the above courses; and for the second degree *eighteen months* in each of the two hospitals, and the same length of time on clinical surgery.

The Royal College of Physicians, London, requires *thirty-six months* attendance upon lectures in clinical medicine, and the same length of time in a medical hospital.

The King & Queen's College of Physicians, Ireland, requires attendance upon clinical medicine and a medical hospital, each *six months*, and upon clinical surgery and a surgical hospital each *twenty-four months*.

The Royal College of Surgeons, Edinburgh, requires attendance upon clinical medicine and clinical surgery each *six months* and the two hospitals each *twenty-one months*.

The Faculty of Physicians and Surgeons, of Glasgow, requires the same.

The Royal College of Surgeons, London, requires *nine months* in clinical medicine, *twenty seven* in clinical surgery, attendance of *one winter* and *one summer* in a medical hospital, and *three winters* and *two summers* in a surgical hospital.

The Royal College of Surgeons, Dublin, requires attendance on each of the four courses of clinical instruction before named, *twenty-seven months*.

The Apothecaries' Hall, England, requires *nine months* of clinical medicine, and *eighteen months* in a medical hospital.

The Apothecaries' Hall, Ireland, requires *eighteen months* attendance on each of the four courses.

The Army Medical Board requires, of clinical medicine and clinical surgery, each *eight months*, and attendance upon each of the hospitals *eighteen months*.

The Navy Medical Board requires the same attendance of *eighteen months* in each of the hospitals, and *six months* attendance upon each of the courses of clinical lectures.

The East India Company Medical Service requires *six months* attendance upon lectures in clinical medicine.

By this statement it will be seen that clinical instruction is regarded so essential in Great Britain, that not a single institution grants a diploma to a candidate who has not availed himself of such advantages. The American Medical Association, which may be regarded as the authorized exponent of the professional sentiment of this country, has repeatedly urged the importance of making such instruction necessary to graduation among us, but as yet with very partial success. But everything must have a beginning, and valuable things have a growth—often a slow one. By keeping the subject before the profession, a practical recognition of its importance will at length become general. In Europe, clinical and hospital instructions are not conducted simultaneously with all the other branches of medical science—that is, students do not attend all the other branches of study while attending clinical instruction; some degree of order and succession is observed. We are making a beginning, we think, in the right way—and it is not a little to make a beginning in a great and good cause.

In looking over, in the same Journal, an account of the courses of instruction of the Medical School of Scotland, we find they have a winter and a summer session, and that these differ decidedly in their programmes. During the winter session the course of study is Anatomy, Systematic and Practical, with demonstrations; Physiology, Chemistry, Systematic and Practical; Materia Medica and Therapeutics, Systematic Practice of Physic, Systematic Surgery, Midwifery, Natural Philosophy, Natural History, General Pathology, Clinical Medicine and Clinical Surgery. In the summer session the course is, Practical Anatomy and demonstrations, Comparative Anatomy, Histology, Practical Chemistry, Botany, Medical Jurisprudence, Natural History, Clinical Medicine and Clinical Surgery.

In the University of Edinburgh, Dr. Bennett, who does not teach the Systematic Practice of Physic, is associated with Dr. Laycock, Professor of Practice, as Professor of Clinical Medicine; and Mr. Syme has the exclusive charge of the Department of Clinical Surgery, while Professor Miller has the Chair of Systematic Surgery. In the Systematic Course, Dr. Bennett teaches Physiology and Histology. Similar arrangements as to the distribution of labor occur in the other schools.

[From the Virginia Medical Journal.]

Clinical Lecture on Retention of Urine from Enlargement of the Prostate Gland, and on Spermatorrhœa in connection with Irritable Prostate: By JOHN ADAMS, F.R.C.S., Surgeon to the London Hospital.

GENTLEMEN—One of the most common causes of retention of urine is enlargement of the prostate gland; a week seldom passes in hospital practice without a case of this description being admitted. I have nothing new to say upon this subject, but presuming that there may be some among you who do not understand it, I consider myself quite justified in directing your attention to it, especially as, a short time ago, a case of this sort was under my care in the wards. The prostate is very apt to become enlarged in old men, and it thus gives rise to a mechanical impediment to the escape of water from the bladder, causing retention of urine; or, as it very frequently happens, your attention is called to a patient who is said to have an irritable bladder, and who is continually passing a small quantity of water without obtaining any substantial relief: if the patient is an old man, you at once suspect that he is laboring under the infirmity in question, and you conclude that the cause of this state of the bladder arises from its being overcharged with urine, and that, as in an overfull cistern, the water is constantly running in small quantities through the waste pipe; you therefore pass a catheter, and at once draw off, perhaps, a quart of urine. The case is now clearly revealed, and you proceed to treat it just as if a complete retention existed. It is said, on high authority, that enlarged prostate is not the disease of the aged. I confess I do not understand this. I admit, however, that in the greater number of aged persons there may be not only no hypertrophy, but actually an atrophy of the gland; yet it most certainly happens that retention from this disease almost invariably occurs in old persons, and, therefore, when called to cases of retention in the aged, we look instinctively to the prostate gland as the cause, and act accordingly. You are aware that both lateral lobes of the prostate become hypertrophied, but the left lobe is supposed to be more frequently affected than the right. It is as well to bear this in mind, as some modification in the passing of the catheter may be thereby necessitated. It is said that the middle lobe is frequently the seat of enlargement, and so, no doubt, it is; but that which is presumed to be the middle lobe has often nothing whatever to do with it, but is a growth springing from that portion of the gland which connects the lateral lobes of the prostate together, and which, in a book I published some time ago on the diseases of the prostate, I designated the "isthmus prostati." This subject has been well considered by Mr. Thompson, who has given the result of numerous dissections of enlarged prostates, and this is one of the results of his inquiries. In the treatment, however, of these cases, it does not much signify whence the enlargement proceeds, nor what is its nature; the catheter must be employed for the relief of the retention. You should, however, bear

in mind the fact, that in enlargement of the prostate the bladder is often exceedingly irritable, and unable to retain even an ounce of urine. This condition can always be well made out by catheterization.

You must, therefore, pass a catheter; you may take a silver or elastic instrument; you may take one with a long curve, or a short curve, or you may pass an elastic catheter with no curve at all. You are all familiar with the ordinary manœuvre required in passing a large prostatic catheter; you get the point down to the neck of the bladder, and then, finding an obstacle, you depress the handle, and thus tilt up the point, and the catheter then enters the bladder. It now and then will happen to you that you cannot get the ordinary prostatic catheter into the bladder, and you try other instruments with like want of success; you then use the elastic catheter, giving it the peculiar curve described and delineated by Mr. Hey, by withdrawing the stilet after the point has reached the prostate; still this will fail you occasionally, and you may exhaust your whole stock of curved instruments unsuccessfully, and you will be surprised to find that a moderate-sized elastic catheter, without the stilet, and made straight before its introduction, will pilot its way gradually between the lobes, and reach the bladder. I have so often seen this, that I really think it better to use the elastic catheter first of all. You cannot do any harm by it, which is more than can be said of the use of the silver instrument.

Now, if you fail in the introduction of the catheter, what are you to do? The patient must be relieved; and it is a rare thing, indeed, that a skillful surgeon is baffled in relieving cases of retention of urine from enlarged prostates; but such cases I have heard of: I never saw it, but it has occurred to the most experienced, and will, no doubt, occur again. Should this unfortunately happen to you, you are recommended to push the catheter through the back of the prostate, and thus make a false passage. This operation is now and then fatal, but occasionally it happens that, if the false passage is maintained, the patient never suffers from any relapse, and considers himself cured permanently. In some cases, it has been thought advisable to puncture the bladder. I need scarcely remark, that the only situation in which the bladder can be advantageously punctured in these cases is above the pubis; but this you can only undertake when the hypogastric tumor is fully developed. The water is to be drawn off night and morning, or more frequently if requisite, and after some days the patient makes water himself, showing that retention has been immediately caused by some unusual distention of its blood vessels, probably some congestion of the veins, which are so numerous around the gland, and under the mucous membrane about the neck of the bladder.

This condition of vessels also explains a symptom of very common occurrence in the cases now under consideration—I mean hemorrhage to such an extent as to re-distend the bladder almost immediately; the bladder becomes intolerant of its contents, and you reintroduce the catheter, and you find a chamber pot half full of fluid, so discol-

ored with blood as to look like blood itself. Don't be alarmed about this; you may assure your patient that it will speedily subside; and in the course of a few days, as in a case just discharged from the hospital, the urine becomes as clear as ever. You may give a little mucilage with liquor potassæ and tincture of hyoscyamus, and in this manner allay the irritability of the bladder.

If you should have much difficulty in passing the catheter, and especially if your patient lives a long distance from you, you may tie the catheter in, and leave it in for a few days. This plan is not usually adopted, but I am sure it is a practice more conducive to the safety of the patient than the constant renewal of painful efforts to pass the catheter night and morning. I don't much like to give opium in cases of irritable bladder from enlarged prostate. It may, however, be advisable to give it. It is not unfrequently given to the detriment of the patient, in cases where the bladder is irritable from over-distention; it tends to increase the evil, as it rather allays the irritation, and thus favors the increase of the accumulation. It may, however, be justifiable even in these cases, as where the surgeon is unable to pass the catheter, and is seeking further advice, as it is called; you may thus gain time, and the patient's sufferings being lulled by the opiate, the desire to micturate is not so urgent.

I am anxious to make a few remarks to you on the subject of spermatorrhœa as frequently connected with prostate irritation; and I do this the more willingly because it is a subject that surgeons do not much like to handle. They rather are disposed to repudiate it as unworthy of their consideration, the consequence of which is that the cases of spermatorrhœa fall necessarily into the hands of those gentlemen who largely advertise in the Sunday newspapers. These journals teem with advertisements bearing on this subject, and the attention of young persons is directed to this complaint, and they are led to suppose that they are affected with a disease of which many of them are wholly innocent. Spermatorrhœa is a disease, and ought to be studied, understood, and treated as such. You will find it quite amenable to treatment if this is carefully, and I may say, scientifically conducted. There is no disease which produces so powerful an influence on the mind as this. When a patient enters your room to consult you on the subject of spermatorrhœa, you understand him at once by a single glance of your eye. Don't imagine, however, that all are cases of spermatorrhœa which are supposed by the patients themselves to be so; nine-tenths of such patients are free from the disease altogether, and on inquiry you will find that the only complaint many have to make is, that perhaps once a fortnight they awake from their sleep with a seminal emission, and that this is wholly unattended with pain, and not followed by any inconvenience whatever. These are just the cases for the empyric. He first fosters and encourages the idea of disease, and then proceeds to cure a disease which really never existed. I need scarcely tell you that this affection is often merely an effort of nature to relieve herself.

I am satisfied in my own mind that in very many cases of supposed spermatorrhœa there is no emission of seminal fluid whatever. Such cases as those to which the following remarks are applicable are of this description; and they are exceedingly numerous. A patient will call on you, and with downcast eye or partially averted countenance, say that he is unfortunately the subject of spermatorrhœa, and that he is confirmed in his opinion by what he has read in books relating to this subject. You inquire into his case, and he tells you that whenever he makes water, it is always followed by a discharge of semen, and that this is especially the case when he passes a stool. You tell him that this is no decisive evidence of the escape of the secretion of the testes, but probably comes from the ducts of the prostate and the vesiculæ seminales. You ask him whether this discharge is accompanied with any sensation, and he answers, No. You are now confirmed in your opinion that he has no spermatorrhœa, for you may be quite certain that no emission of seminal fluid ever occurs without some sensation. You will find, however, that it is impossible to convince the patient that he is laboring under a delusion, and I do not advise you to appear to be too positive on the subject. As surgeons you are bound to tell the truth, and place the patient's case fairly and properly before him; and if he still remains unconvinced as to the true nature of his case, do not send him away, but tell him that you hope, nevertheless, by appropriate means, to be able to remedy the condition under which he labors. I always make a point under these circumstances to prescribe some mild tonic with a few grains of soda and amonia, and I generally pass a fair-sized catheter, first to prove that there is no stricture, and next because it acts as a gentle stimulus to the urethra, perhaps causing a slight pain and the flow of a few drops of blood, which may divert the patient's attention from an imaginary evil to a real fact. I have found that in a very large number of these cases there is really nothing whatever unusual, and that the disease is altogether imaginary; while in a very few the whole malady, if so it can be called, consists in the escape of a small quantity of a slight glary secretion, possibly mere mucus from the urethra; or it may be a little fluid squeezed, by forcing at a stool, from the prostate gland; any of the true vesicular secretion is comparatively rarely met with. I recommend you, however, not wholly to repudiate the case; convince him of his error, if you can, but do not dismiss him as if you wholly disbelieved his statements, for he will still cling with obstinate tenacity to his own ideas, and will think that you are too ignorant to understand his case.

Now, these are also just the cases for the quacks; and such cases are of constant occurrence; I could enumerate many such.

I now call your attention to another condition frequently associated with the former, but frequently existing as a positive disease independent of it. I mean true spermatorrhœa, and nocturnal seminal emissions. I name them separately, although the latter is comprehended in the former term. But I have some doubt whether

spermatorrhœa does often take place at any other time except during the night, and under the influence of, or accompanied by a dream. It, however, may happen under particular states of excitement at any time, and as a consequence of one or two conditions; that is, it may arise from trifling excitement, where great debility of the organs of generation has resulted from masturbation; or in cases of excessive over-excitement, in a vigorous state of the parts. The remedy in both cases is simple enough, namely, abstinence from those causes which lead to the condition under consideration; in other words, avoidance of all excitement of the generative organs. The former is often referred to irritation of the prostate gland, and that part of the urethra where the seminal ducts terminate, namely, the prostatic sinus; and hence the employment of caustic to the part frequently affords effectual and permanent relief. This plan, coupled with the use of tonics and all means calculated to invigorate the system, is frequently all that is requisite for its cure. Nocturnal emissions are far more common. They are the cause of serious annoyance; and if they frequently recur, produce effects most debilitating to the patient. It is not my intention to go into all the symptoms resulting from this unfortunate state of things, but I must warn you not to attach too much importance to the occasional discharge of seminal fluid at night. Unless it often recurs, we may rather regard it as a relief to the system, than as constituting a very serious affection. Still, when once the mind of a patient is directed to it, it becomes to him a source of extreme annoyance, and he rushes blindly at once to those whom he supposes are capable of affording him immediate assistance. You must remember what I said before, that no diseases possess so powerful an influence on the mind as those connected with the organs of generation; and this need not on reflection excite our surprise, when we consider the universal sympathy between these parts and the body, as well as the mind, even in health.

Let me explain to you what I conceive to be the rationale of this condition. Nocturnal emissions occur almost invariably under the influence of a dream, and, as far as I can ascertain from the history of patients, are always accompanied by a sensation pleasurable or otherwise. I believe they never occur without exciting or being accompanied by some sensation. My inquiries also lead me to the conclusion that they generally occur just at the termination of the first natural sleep, and usually in the early part of the morning. They are, therefore, matutinal rather than nocturnal emissions. This is rather an essential point to understand, as you will see in the sequal. It is difficult to say whether they occur as the consequence of a dream, or whether they are of themselves the cause of the dream. My opinion is that in this regard they vary. I cannot go into a lengthened discussion as to the true nature of dreams. I believe that dreams frequently originate in the mind in imperfect sleep as a consequence of the powerful influence upon the mind of some past event; and every one knows that dreams are readily

excited by some physical impression; thus school boys excite to micturition by placing the hands of their school fellows in cold water during sleep. Now, in the case of seminal emissions, at least such as occur night after night, or morning after morning, I think it is the mental impression which excites the dream, and the emission is the consequence. The patient is always thinking of his condition; it haunts him day and night; he gets a habit of thinking of his state, and hence in a weakened state of parts the habit of secretion and emission is also attained. That dreams are also excited by an ever-charged state of parts must be evident at once, and such dreams are also accompanied by seminal emissions. I need scarcely allude to the natural mode of relief in such cases—but even these cases admit of considerable melioration by suitable means. The phenomena of dreams constitute a most interesting department of psychology. I shall not enter into the subject here; it is admirably treated by the late Dr. Abercrombie, and has also been particularly elucidated by Lord Broughman in his Discourse on Natural Theology. In reference to our own subject, however, I may be permitted to allude to a well-attested phenomenon connected with dreams; I mean the rapidity with which, as Lord Brougham expressed it, a long succession of images passes through the mind with perfect distinctness and liveliness. In a dream, which occupies only an instant of time, a series of ideas relating to many events will frequently pass before us. The proof on which this assertion rests illustrates at the same time the fact that dreams generally happen just at the termination of sleep, and whilst, it may be said, we are half asleep and half awake.

I am certain that this is the case with dreams attended by seminal emissions; and it is a belief in the correctness of this assertion that has led me in very many instances to recommend a simple procedure, which often alone effectually puts a stop to those discharges. I could enumerate many cases in which, by simply directing a patient to rise early in the morning, and immediately after his first sleep, a discharge, to which he has been accustomed for many days and weeks in succession, has been wholly put a stop to, and has not recurred. I believe that the first sleep is always the soundest; and if this be so, the mind may best rest as well as the body, and no dreams occur; but if the patient indulges in a second sleep, the mind wanders, dreams take place, and that impression which weighs heaviest on the mind gives rise to its own peculiar train of ideas, and hence emissions, etc. Surely this is no difficult remedy to pursue; it only requires a little resolution. It is conducive to health both of body and mind; and if it thus breaks a chain of association, attended with such unpleasant results, it certainly is well worth our deep consideration and trial. Indeed, I find no difficulty in getting patients to put it to the test, but after a time they frequently lapse into their old indolent habit, and are again annoyed by emissions, which, however, seldom recur with their wonted frequency, and sometimes wholly cease.

You must remember, however, that while you are submitting your patient to this moral regimen, as I may call it, it is desirable, for various reasons, to pursue some medical treatment, and I advise that you should pass a moderate-sized catheter twice or thrice weekly, and give a little conium at night, and a few grains of carbonate of soda, in any vehicle you please, say infusion of gentian, two or three times a day. I also generally advise a cold hip bath night and morning. This may be regarded as a very essential part of the treatment, and I have often found it successful when used alone.

I should be sorry to assert that this method of treatment will invariably answer. It certainly will not, but you will be surprised at its success in very many instances, and is therefore well worthy of a trial. If it fails, no harm results; but I think it will not fail, for the remedies or means now recommended are generally attended by an improvement in the general health, and are, therefore, most likely to result in the relief of a local disease; and surely this affection may be ranked in this category.

If the plan does not succeed, recourse may be had to the use of the nitrate of silver, which, concealed in a canula, is to be applied to the veru montanum, with a view to allay the irritability of that part of the urethra where the seminal duct ends; for you all know that irritation of the orifices of ducts will always lead to a flow of the peculiar secretion of the gland to which the duct belongs; a fact you may easily illustrate by touching with your tongue Steno's duct, by which a flow of saliva is at once excited. But I am bound also to tell you that the simple plan I have developed to you has in very many instances succeeded where the use of the caustic has wholly failed; and further, I must say that the caustic treatment is not wholly without risk, as I have known severe stricture to have resulted from its improper and indiscriminate use.

The subject I have just considered is not a pleasant one by any means. It is usually consigned to the empyric; thorough-bred surgeons do not like to meddle with it. It is only for this reason I venture to submit my observations to you, and I am quite certain that attention to the circumstances I mention will amply reward your pains. You may be the means of affording relief in many cases of unusual difficulty, and you will be able thus to give satisfactory relief to the minds of those who really require very great commiseration. I do not enter into the subject very fully; I am only anxious to introduce it as an appendage to the few remarks I have made on the prostate gland, and no doubt the disease in question is most intimately associated with the prostatic part of the urethra.

The Influence of the Gulf Stream upon the Summer Climate of the Atlantic Coast of the United States. Read before the Montreal meeting of the American Association for the Advancement of Science. By JAMES WYNNE, M.D.

The object of this paper is strictly hygienic. There are few medical men, engaged in any considerable practice, who have not under their charge patients whose diseases require a change of climate, as one of the most efficient modes of relief; and it not unfrequently happens that the proper selection of a residence is a matter of such importance, as to constitue the entire difference between a favorable and an unfavorable termination of the disease. Any light, therefore, thrown upon this subject, which will enable the medical man to indicate the choice of a selection with greater confidence, as to the absolute condition of the climate, will, I am convinced, be kindly received by those members of the Association who are connected with this profession, and may not be unwelcome to those who are engaged in other pursuits.

The recent examinations conducted by the officers under the direction of the Superintendent of the Coast Survey, have shown that the bottom of the Atlantic Ocean presents a range of mountains, pursuing a similar course to the Apalachian chain, some distance back from the coast. These examinations have not yet been completed, but so far as they have been prosecuted, they clearly demonstrate the continuity of this chain of submarine mountains, and its general course. The effect of this configuration of the bottom of the ocean over the temperature of the water, is clear and unequivocal. The whole extent of this influence has not yet been determined, but thus far it shows that the Gulf Stream is not one uniform mass of warm water, pursuing a northeasterly course along the coast, at a pretty uniform distance from it, but a series of bands of warm water, interspersed with colder ones. These have been laid down by Prof. Bache, with admirable precision, in his map delineating the distribution of the temperature of the Gulf Stream. An underlying Polar current of cold water, even in the more southerly explorations, is likewise clearly established.

The position of this mountain chain, in affecting the temperature of the air along the coast, as well as the water overlaying it, has been as clearly demonstrated. Lieut. Maury, in his pilot-chart of the North Atlantic, has recorded the direction of the wind, for each month in the year, with great accuracy. The information contained in his chart is taken from the most authoritative sources, and, in some instances, extends back as far as 1810. This chart subdivides the ocean into squares, of five degrees each of latitude and longitude, and the monthly observations, within each subdivision, are made to extend over this surface. For the purpose of the present inquiry, subdivisions of a single degree would have afforded greater definiteness, but the facts deduced from the chart, as it is, are of the highest value. As our inquiry is confined to the summer months, when invalids in search of health, or those who are well, in pursuit

of a more temperate air than is to be found in the cities, or even in rural districts, visit the sea-shore, the deductions from the chart will be confined to the months of June, July, and August, and to that portion of the Atlantic stretching along the sea-coast.

In the subdivisions between latitude 30 deg. and 35 deg. and longitude 70 deg. and 75 deg., embracing the sea-coast from St. Augustine, in Florida, to Cape Hatteras, in North Carolina, there were made ninety-nine observations of winds, in the month of June; of these forty-one, or nearly one-half, were from the south and southwest. In July eighty-four winds were noticed, of which fifty-two came from the south and southwest; in August, one hundred and thirty-eight, of which sixty came from the south and west.

In the subdivision embracing latitude 35 deg. to 40 deg. and longitude 70 deg. to 75 deg., extending from Cape Hatteras to Cold Spring, N. J., three hundred and fifty winds were observed in the month of June., of which one hundred and forty-three were from the south and southwest; in July, three hundred and ten, of which one hundred and sixteen came from the south and southwest; and in August, three hundred and sixty-six, of which one hundred and twenty-three were from the south and southwest.

In the subdivision between latitude 40 deg. and 45 deg. and longitude 70 deg. and 75 deg., embracing Long Island Sound and the southern expanse of the New England coast, in June two hundred and thirty-one winds were noted, of which one hundred and eight came from the south and southwest; in July, three hundred and eight, of which one hundred and sixty were from the south and southwest; and in August, one hundred and eighty-three, of which sixty were from the south and southwest.

These are the facts. The deductions from them are important. It appears, from these observations, that of the prevailing winds in the summer months, never less than one-third, and, in many instances, one-half, come from the south and southwest. It must be remarked that the winds noted were sailing winds, with some degree of force, and not the slight, ruffling breeze which, although insufficient for the purpose of rapid sailing, is yet most grateful in its effect upon the health and comfort of those so circumstanced as to come within its range. The usual direction of this lighter breeze on the Atlantic, in the summer months, is from the south and southwest, directly over the current of warm water composing the Gulf Stream The winds from this quarter are, for the most part, gentle, balmy, exhilarating, and peculiarly happy in their influence upon the human body; those from the north and east, on the contrary, are violent, raw, and depressing; while the former should be courted by the invalid, the latter should be as sedulously avoided.

It by no means follows that the wind on shore is the same as that upon the ocean. A very slight obstruction, as an intervening range of hills, or indentation of the coast, may leave any particular situation in calm, or subject to the influence of a less grateful wind, while the whole surface of the water is swept by a delightful air from the south or southwest. An example of this may be given in the High-

lands of Navesink, situated a short distance from New York, and immediately behind the light-house on Sandy Hook point. These Highlands, whose sides are covered to the water's edge by a rich growth of vegetation, and are highly picturesque in their effect, are shut off from the southwesterly ocean winds by a small promontory, the effect of which is to render the air in the sheltered localities calm and oppressive, while the sandy point directly in front, and scarcely more than a stone's throw distant, is agitated by a balmy and refreshing breeze. Sachem's Head, and the contiguous town of Guilford, furnishes another illustration of this fact. The promontory termed Sachem's Head, which juts far out into Long Island Sound, is visited almost daily in the summer by the southwest trade wind, which begins about ten in the morning and continues pretty regularly during the day, unless intercepted by some more violent wind. It not unfrequently happens that while this balmy ocean breeze is playing over this promontory and reducing the temperature below 80 deg., the town of Guilford, but a few miles inland, is subject to a land breeze, and exhibits a range of temperature between 90 deg. and 95 deg.

The traveler over the New York and New Haven and New London Railroads, which pursue an easterly course along the Long Island Sound, cannot fail to remark the perceptible difference almost always observed in the temperature after leaving New Haven for the east. However exalted the temperature may have been, or oppressive the condition of the atmosphere between New York and New Haven, he is almost certain to be met by a delightful ocean air from the southwest, a few miles east of New Haven, which accompanies him on his passage to New London. This is due to the configuration of Long Island.

Near New York, the northern shore of Long Island rises into elevations of greater or less extent, but sufficiently so, at most places, to intercept the sweep of wind from the ocean on its southern border. These elevations gradually diminish in an easterly direction, until a point is reached a few miles east of New Haven, where the whole island becomes flat and sandy, and but a few miles in width. This low plateau offers but slight interruption to the progress of the southerly ocean winds, and allows them to play over the surface of the water in the Sound itself, and fan the opposite New England coast.

The islands off the coast of South Carolina, as well as the coast of North Carolina, Virginia, and New Jersey, have a greater or less south and southwestern exposure. Within these limits are found Old Point Comfort, Cape May, and Long Branch, which have great celebrity as sea-side places, and attract large numbers of visitors. Each of these places is subject, however, to the depressing effects of the northeasterly gales; the more southerly points are less affected from this cause than the more northern.

The whole stretch of Long Island on its southern side—which is at present, with but few exceptions, little better than an inhospita-

ble sand bar, drifted up from the waves of the ocean—that portion of the Connecticut coast to which I have alluded east of New Haven, as well as Rhode Island and a part of Massachusetts, enjoy in the highest degree the advantage of exposure to the south and southwest, and are at the same time best protected from the winds from the northeast. Newport, with many disadvantages, not the least of which is the compactness of its houses and their almost total exclusion in the old part of the town from a sea view, enjoys a world-wide reputation as a sea-side residence, for which it is wholly indebted to the salubrity of its air, derived from its sheltered position from the northeast winds on the one side and its free exposure to the southern trade wind upon the other.

It is not the purpose of this paper, however, so much to point out individual localities, as the general principles upon which the sea side climate of the Atlantic coast may be determined, a knowledge of which will enable the practitioner or intelligent traveler to select that locality best adapted to the particular case. As a climate for invalids that is most desirable which furnishes the greatest protection from the depressing northeast winds, and the fullest exposure to those which come heavily laden with health-restoring qualities from the balmy southern ocean, borne along the current of the Gulf Stream. Many sheltered positions may doubtless be found upon the coast south of Long Island, uniting many if not all of the advantages already pointed out, which it is earnestly to be hoped will be discovered and improved. The advantage of sea-side resorts in such positions as to render them available for those whose occupations or means do not permit them to take long journeys, cannot be too highly estimated.

Clinical Teaching and Sectionalism.

Extract from Prof. BRECKNELL's Lecture in the New Orleans School of Medicine.

The American Medical Association has insisted that a greater amount of hospital instruction is indispensable to the student of medicine. This has been the point more strenuously urged, perhaps, than any other; we think it more than reasonable; we have adopted their views, and we are willing to leave the decision even to our enemies (if we have any,) whether we do not afford greater advantages to our pupils in this respect than any other school in the land. Six, out of ten, of us give *daily* bed-side instruction in the Charity Hospital, and the remaining members give tri-weekly dispensary clinics at our Free Dispensary under this roof, where an average of one hundred patients a week present themselves for treatment. Indeed, such is the proximity of the Charity Hospital, that *all* our patients, numbering hundreds, are right here at our very door, and our pupils do not have to travel miles, or even cross rivers, in their visits to the sick.

Does any other school in the land do this? We desire to draw no invidious distinctions, but we have assumed a virtue, and it is our privilege, our right—or our duty, if you will—to prove that we have it, by all the strength of truth. And yet I will not compare our Institution to those around us, and which may be considered our honorable rivals; but we will travel far from home, and dare a comparison with schools located in the so-called "Medical Metropolis" of our country. We will go with you to Philadelphia, the hitherto fashionable resort of Southern students, and we will have the boldness to place ourselves beside the time-honored University of Pennsylvania, and the gigantic Jefferson. Surely these Institutions will not object to the comparison. The classes of these two schools amount, in the aggregate, to at least nine hundred pupils. What are their facilities for hospital instruction? Every man who has ever pursued the study of Medicine in Philadelphia, knows that the old Pennsylvania Hospital is the grand rallying point—it is the all in all of our Philadelphia brethren, in the way of "hospital advantages." Yet who does not know that the Pennsylvania is, and always has been, in the hands of the friends of the University, whose Faculty control the clinical advantages, and that the "ticket" furnished gratuitously to students of other schools is a mere nominal privilege? I quote from the late announcements of the University and the Jefferson, to prove that in Philadelphia, so far from the student being afforded facilities for daily bed-side instruction—the very best he can possibly seek—he goes but twice a week to the Pennsylvania Hospital, and there seats himself in a crowded ampitheatre—a room not capable of holding more than one-fourth of the students who flock to that city—to listen to abstract lectures on patients who are brought into the room, it is true, but on whom the sense of sight alone can possibly be brought to bear. The University announcement says:

"The Professor of the Theory and Practice of Medicine, whilst conducting the Course in the University, also lectures, twice a week, on Clinical Medicine in the *Pennsylvania Hospital*, during his term of service as Senior Physician to this Institution.

"The Surgeons of this hospital perform similar valuable Clinical service in connection with the branch of Clinical Surgery."

The Jefferson announcement says: "The hours of attendance at the Clinic of the College are so arranged as to permit the students to attend every Wednesday and Saturday in the Clinic held at the Pennsylvania Hospital. The Course adopted in that Clinic is the same as at the Clinic of the College. With so large a class in attendance, it is impracticable to visit the sick from bed to bed, and hence, on the days named, the patients are brought into the amphitheatre, and there treated and lectured on."

So that, in the winter season, when twelve hundred students are collected in Philadelphia—hundreds of them from the South—amphitheatre Clinics, twice a week, at the College and in the Pennsylvania Hospital, constitute the much-vaunted "Clinical advantages" of the "Medical Metropolis" of our country! There are no oppor-

tunities for studying disease at the bed-side, except in the summer, and we all know how few of the twelve hundred are to be found there after the lectures close in the spring.

But what a very farce is this system of amphitheatre Clinics, when compared to daily bed-side observation of disease! It is all well to introduce surgical cases before students in this way, when you intend to operate, for then it is the sight alone that is to be brought into play, and the amphitheatre affords the best opportunity for the whole class; but to properly comprehend the true nature of the affection, even in these cases, it is necessary that the student should have seen the patient previously in his bed. What shall we say, then, of the Clinical Lectures in Philadelphia on the Practice of Medicine? Do they take a patient who is laboring under pneumonia, or pleurisy, or enteritis, or any of the acute and dangerous diseases—do they take him, I say, out of his bed and carry him into an amphitheatre, and there lecture on him? Or, rather, does not every dictate of humanity, every duty which the physician owes his patient, forbid any such unwarrantable disturbance and exposure? Or even if such patients were thus rudely served, does the student who listens to the lectures, feel the pulse, or auscult and percuss the chest? Does he have any opportunity of *practicing* the *art* of his profession? Why, gentlemen, I have seen a learned professor deliver one of the most interesting lectures imaginable on the sick man, who sat by him in the amphitheatre, and then find that he had been lecturing on the wrong patient.

The truth of the matter is, these amphitheatre clinical lectures, with the exception of their adaptation to surgical operations, and the exhibition of some of the more palpable external phenomena of chronic disease, are the medical humbugs of the age. Imagine the professor, with the cadaver before him in an amphitheatre, demonstrating the *pathological* condition of the organs! Or imagine him *exhibiting* to the class a case of cataract, or a fistula lachrymalis! Cannot a man with half an eye perceive that the system is rotten to the very core?

But leave the gate of the Pennsylvania Hospital, which I have shown to be utterly incapable of accommodating the crowds of students who flock to Philadelphia, and where in that city will you point me to another hospital fitted and devoted to the purposes of the student? There is not one. The much-vaunted Blockley is the only other establishment which pretends to offer any advantages. It is large and accommodates many patients, but it is at least three miles away from any school, and is across the Schuylkill River; indeed it is utterly inaccessible to the student who attends lectures. I have tried it, and I speak knowingly.

If, then, as the Jefferson Circular says,—"with so large a class in attendance, it is impracticable to visit the sick from bed to bed," and even when driven to their amphitheatres for clinical instruction, we find the crowd in Philadelphia too great, what sane man will compare their advantages for clinical instruction with ours? There

they have three or four physicians and surgeons, who are all directly or indirectly connected with the University, to deliver amphitheatre clinical lectures to twelve hundred students twice a week; here we have six, out of ten, of the professors in our institution alone in possession of ten or twelve wards, with our class divided amongst them, and visiting the sick every day of the week at the bedside itself; and the lecture hours are so arranged that the student has the privilege of walking this vast sick house during 2½ hours of each day, and may thus make the visit with several different professors every morning. Here there is no occasion for a rush and a squeeze; such is the praiseworthy liberality of the hospital regulations, any and every student, who properly demeans himself, may visit any patient in advance of, or after the teacher, and thus quietly and profitably pursue the investigation of disease. I do not hesitate to assert, then, that New Orleans is this day capable of affording more clinical advantages to a larger number of students than any city in the Union. It will not do for men who have never been amongst us to deny this; all they have to do is to come and look, and they will give it up. I have personally visited all the larger Northern cities, and I speak without fear of successful contradiction.

If there be one amongst you, however, who imagines that by this comparison I desire to detract one iota from the full measure of praise universally accorded to our Philadelphia brethren, let him at once rid himself of the impression. I have not words with which to express the high estimation in which I hold the noble spirits from whom I derived my medical education: no man ever heard me utter one word derogatory to such men as Chapman, Wood, Horner, Gerhard, Norris, Meigs, and a host of others; but the day has arrived when the medical men in the South must awake to the fact that the lecture rooms of these worthy men are crowded to such an excess, that it is no longer a matter of doubt that the Southern student of medicine, who goes North, leaves behind him advantages far greater than he can possibly meet with there; and this is a sufficiently weighty argument in favor of home patronage, without reference to the even more important truism, that the student who intends to practice at the South should be conversant with Southern diseases.

But it has become fashionable, gentlemen, for us Southerners to be charged with "Sectionalism" the moment we open our mouths, either in favor of the advantages which we know we possess, or against the suicidal course pursued by our population, of running to the North for the very things we have amongst ourselves in greater profusion and of better quality. The cry has been sounded long and loudly, and even medical men have now come under the ban. Now, I believe I am possessed of a full share of patriotism, I believe I love my whole country as fondly as an American can or should love; and with all the enthusiasm I may exhibit in favor of my home, I can freely declare that I have no grudge against our neighbors of the North, nor would I willingly detract one iota from the full meed of praise due them in every way; yet such is the fashiona-

ble cant of the day, I believe I shall be charged with sectionalism for the comparison I have drawn.

But what of this? If to love one's own home more dearly than we do our brother's; if to think the woodbine which creeps o'er the door-way of our little cottage blooms forth sweeter fragrance than all others; if to prefer our own glowing, genial Southern sun to the icy breath of Boreas; if to compare our condition with that of others, and, by the comparison, to become more content with our own; if to exert ourselves by all honorable means to excel even our brother in cherishing and developing the resources by which we are surrounded; in fine, if to search out the blessings which a great and a just God has showered on us, and having found them, to labor to enjoy them; if all this be the hated "Sectionalism," then is sectionalism our banner, and it shall be planted on the topmost brick of this edifice, and on it shall be inscribed in letters of living light—Home, Progress, and Reform!

The Supra-Renal Capsules.

Medical practitioners have always occasionally met with a disease affecting the color of the skin and accompanied by extreme emaciation, of the pathology of which they were utterly ignorant. We ourselves had an opportunity of seeing such a case in the wards of Prof. Flint, at the Buffalo Hospital of the Sisters of Charity. In this case, as far as our memory serves us, the patient was exceedingly emaciated; had cough and extensive pulmonary disease, and was effected with a brown discoloration of the skin, which was general, with the exception of spots over the body of dazzling whiteness, which were of irregular shape and varied in size from that of a sixpence to a dollar, or in a few places were even larger. The patient died a few days after his admission into the wards, but no autopsy was made.

A short time after this, we saw a notice of a monograph by Dr. Addison, on "*The supra-renal capsules and their connection with Bronzed Skin.*" Dr. Addison had made a number of post-mortem examinations of patients who were affected with this peculiar discoloration of the integument, which he denominated "*Bronzed Skin*," and invariably found associated with it a disease or disorganization of the supra-renal capsules, by which their function was entirely abolished. As Addison was the first to point out any connection between bronzed skin and disease of these organs, it has been proposed that the disease shall be called "Addison's Disease," as albuminuria connected with organic disease of the kidneys was named after its distinguished discoverer, Dr. Bright. Physiologists, as is well known, have never been able to determine definitely the function of the ductless glands or the blood glands, as they are some-

times called; which are the spleen, thynoid and thymus glands, mesenteric glands and the supra-renal capsules. These organs have all the anatomical characteristics of ordinary glands, with the exception of ducts; and, as owing to this, their secretion, if they have any, cannot be subjected to analysis, their *role* in the economy has remained almost unknown. In none of these however, has the obscurity been so great as in the case of the supra-renal capsules. The brilliant experiments of Bernard in regard to the Glucogenic function of the liver, which so surprised and delighted the scientific world, and which made such an advance into the pathology of that hitherto unaccountable disease, diabetes mellitus; gave a new impulse to the study of the ductless or blood glands; as by these experiments Bernard had shown that the liver, in addition to its office as a bile secreting organ, formed sugar within its substance, which was given up immediately to the mass of blood without the intervention of an excretory duct: since this was discovered, it has been shown that the liver also produces fat *de novo*, though as much is not known about this function as about the production of sugar. Thus the liver, in addition to being an ordinary gland, possessed of an excretory duct, is in reality a blood gland like the spleen, or supra-renal capsules.

A great proportion of the energy of the investigation into the functions of the ductless glands has been directed towards the spleen, and it is now supposed, and on pretty good foundation, that the spleen and mesenteric glands have an important office in the formation of blood globules. The physiology of the supra-renal capsules however, had still remained buried in its original obscurity.

Upon the appearance of the excellent monograph by Dr. Addison, observers in all parts of the world set themselves to work upon the physiology of the supra-renal capsules; the paper of Addison having thrown some light on the subject, and seeming indeed to establish some connection between these organs and the formation of pigment, or the regulation of its deposition. The Physiologists who have made known to the world the results of their experiments, are Gratiolet, Brown Sequard, Philipeaux, and Dr. Harley, of University College, London. The experiments of these gentlemen, whose names our readers will recognize as belonging to men eminent in this department, have led them to somewhat different results: we had the pleasure of listening to lectures by Dr. Brown Sequard on this subject a year ago, when he seemed to prove that the supra-renal capsules were essential in the highest degree to life, even more so than the kidneys themselves; as an animal survived for two or three days after the extirpation of the kidneys, but it lived for a few hours only after the removal of the supra renal capsules. Brown Sequard also showed that animals from whom these organs had been removed, were convulsed and affected with that peculiar nervous phenomenon which is known as "turning," this turning always being in the same direction. He also asserts that death supervenes too rapidly to be due to inflammation of the peritoneum, and indeed,

on examining this membrane after death, no evidences of inflammation are observed. Brown Sequard performed experiments in the presence of his audience, and we had an opportunity of witnessing the phenomena which he described.

The most elaborate and satisfactory paper on this subject which we have yet seen, is from the pen of Dr. Harley, and appeared in the last number of the British and Foreign Medico-Chirurgical Review. This article we have carefully perused, and it was this which led us to make the preceding observations. Thinking this subject to be of great importance to us as Physiologists and Pathologists, we have been thus extended in our remarks, and will give a brief recapitulation of the more important results at which Dr. Harley has arrived; this we deem the more appropriate, as it is probable that many of our readers do not have an opportunity of seeing the above mentioned periodical.

In anatomical structure, these organs present no very striking points of difference from some of the ordinary secreting glands of the economy; they are formed of a medullary and cortical substance like the kidneys. There is a peculiarity however in their chemical constitution. "In the beginning of the last year, M. Vulpian communicated to the *Societie de Biologie* the discovery of a very peculiar reaction possessed by the supra-renal capsules of vertebrated animals. He found that aqueous solution of iodine brought in contact with the medullary substance gave rise to a beautiful rose color. And further, that the greater portion of oxidizing agents acted like the iodine solution, although in a minor degree. Even the oxygen of the air, under the influence of light, produced the same effect. I have repeated M. Vulpian's experiment on the medullary substance of the supra-renal capsules of sheep with success; but am equally at a loss with the author to form an opinion as to the nature of the substance which possesses the strange property alluded to. We as yet know so little regarding the nature of color and coloring matter, that it would be futile to attempt to draw any conclusions with regard to the import of the rose colored reaction above spoken of."

"Not being able to separate the coloring matter, M. Vulpian, in concert with M. Cloez, proceeded to extract the 'immediate principles' of the supra-renal bodies; and these gentlemen have recently communicated to the *Institut de France* as the result of their united labors, the discovery of hipuric and tanrocholic acids in the supra-renal capsules of herbiverous animals. But as these substances have been abundantly found in different parts of the animal body, their discovery in the latter organs, although interesting, unfortunately throws no light upon the nature of their functions."

Dr. Harley has since seen a communication from Prof. Virchow, in which he confirms the observation of M. Vulpian with regard to the rose colored reaction and also mentions that he has found sarcine in the medullary substance.

The question arises whether the supra-renal capsules are organs peculiarly essential to fœtal existence and development. It was formerly supposed that this was the case, and the arguments in

favor of this idea, were the great relative size of these bodies in the fœtus, and their small size in adults. Meckel states that at the third month, the supra-renal capsules and kidneys are of equal size, at the sixth month as 2 to 5, at birth as 1 to 8, and in adult life as 1 to 28. Later observations however, by the author, Brown Sequard, and others, show a different result in the case of some of the mamualia. Dr. Harley has been confined in his observations to the cat, having examined thirteen fœtal and six adult capsules. Without giving the figures and calculations, we will give the results at which Dr. Harley has arrived and in which he confirms Ecker, Frey, and others: "The weight of the supra-renal capsules in the kitten at birth is to that of the kidney as 1 to 57.3; and in the adult as 1 to 54.8. But as so few adult capsules and kidneys were employed, it may be perhaps better to take the average of the whole six that were examined, which would then give us the relative weight of three organs in the full grown animal as 1 to 46.49.

"We shall find by a very simple calculation that the kidney was after birth increased 12.35 times in weight, while the supra-renal capsule at the same time has increased 14.87 times in weight. What conclusion are we to draw from this fact? We here see that the supra-renal capsules increase in size, as age advances, at a greater rate than the kidneys. I must here speak with caution however. Small statistics are dangerous data to draw conclusions from, and perhaps a larger number of observations might furnish us with different results."

Thus our readers will see that Ecker, Frey, and Brown Sequard, whose observations are here confirmed by Harley, have developed an exceedingly important fact in relation to the probable comparative activity of the function of the supra-renal capsule, whatever it may be, in fœtal and adult life; correcting the doctrines promulgated by Meckel, that these organs in the mamualia diminish after birth, both in relative size and activity of function.

We now come to experiments, bearing directly on the function of the supra-renal capsules. The first experiment was on an adult cat, from which the right capsule was removed. The animal survived nine days after the operation, and on post mortem examination, no cause of death could be discovered.

Another experiment was made on a white cat, from which the capsules were removed. This died in twenty-four hours, and on examination there were found all the indications of peritonitis.

Another experiment was made on a small white coach dog, from which the left capsule was removed. It died on the twelfth day, and on examination, signs of peritonitis were discovered.

An experiment was then made on two Guinea pigs, in one of which the abdomen was opened, and the amount of injury which the parts would suffer by the removal of the supra-renal capsules, was inflicted, the wound sewed up, and the capsules allowed to remain; the fellow, which was of the same age, sex, and development, was then deprived of the capsule on the corresponding side. Both these animals died within twenty-four hours after the operation. The

same experiment was then repeated on two cats. The cat from which the supra-renal capsule (the right,) was removed, lived two days; the other died during the third night. In the abdomens of both, signs of peritonitis were distinctly visible.

The next experiment was made on a bull terrier dog, by removing one of the capsules without applying a ligature to the vessels, the body being euncleated with the fingers. The dog remained in the author's possession for five months, and did not suffer from a day's illness.

The next experiment was one of exceeding interest: it was on a large tom cat, in which, on opening the abdomen, the right capsule was rough and hard as a stone: it was euncleated with the greatest facility. The same operation was repeated on the other side with a similar result. On making a section of the capsules, it was found that a considerable portion of the medullary, as well as of the cortical substance, had become replaced by a calcareous deposit, consisting chiefly of carbonate of lime. The remaining portions of the gland contained so much fibrous tissue, that the normal structure might be said to have entirely disappeared. As the operation on this animal had been performed with the utmost facility, and there had been no hæmorrhage, or any apparent injury done to the surrounding parts, except the tearing through the vessels and nerves, the author felt sanguine of success. His astonishment was great, therefore, when, arriving at the college next morning, he found the cat dead. The post mortem examination revealed nothing, though the blood was searched for signs of phlebitis, examined for crystals, and for the flakes of pigment described by Brown Sequard. As it has been found by Ludwig and Haffer, that section of the splanchnic nerves will kill animals in one or two days, and according to Brown Sequard, mere pricking or cutting of the semi-lunar ganglion proves fatal to rabbits in thirty hours, while division of the sympathetic in the neighborhood of the kidneys causes death in twenty-three hours: in absence of other proof of death, it is probable that it resulted from injury done, in tearing out the capsules, to the ganglionic system of nerves.

The extirpation of the right is more fatal than the removal of the left capsule, as is proved by experiments which the author has cited, but which it is unnecessary for us to state. M. Gratiolet thought that this fact was to be explained by the proximity of the liver, and the occurrence of hepatitis; at first Dr. Harley was of this opinion, but he now very justly concludes that it is due to another cause. The right semi-lunar ganglion, which is much larger than the left, lies (in the dog and cat,) directly beneath the supra-renal capsule; while the smaller left semi-lunar ganglion is placed on the left crus of the diaphragm, and internal to the supra-renal body. Thus it will be immediately seen that a removal of the right capsule will do more mischief to this ganglion, and this injury has been shown by Ludwig, Haffer and Brown Sequard to be sufficient to produce death in a short time.

As it is generally the case in the removal of double organs, that if one be left it becomes hypertrophied from being compelled to perform a double function. Dr. Harley was anxious to observe if this was the case as respects the supra-renal capsules. He accordingly removed the right capsule from a cat, which had made an excellent recovery from the operation of removing the left about a month before. Nothing unusual, however, was observed: on the morning of the third day it died, and on opening the abdomen, two of the lumbar lymphatic glands were observed very much enlarged, and presenting a peculiarly beautiful, semi-transparent, lobular appearance.

Dr. Harley performed another experiment on a piebald rat, with reference to the same point. The right supra-renal capsule was removed, and the animal made a rapid recovery, being in excellent condition at the end of six weeks. The left capsule was then removed, and compared with others taken from animals of the same species and age, in order to ascertain if it had become hypertrophied. But in this, as in the case of the cat, there was no very marked difference in either its size or appearance. From the effects of the latter operation the animal speedily recovered, and ultimately became very fat and healthy looking.

An experiment was made on a white rat, in order to observe if any change would take place in the color of the hair and skin. Both capsules were removed at an interval of nine days. The animal lived sixteen days after the last operation, and during that time the color of the hair and skin was carefully watched, without discovering any alteration, excepting that the neck became denuded of hair, was covered with a luxuriant crop of young hair, about an eighth of an inch long.

The foregoing experiments, which we have presented in as condensed a form as was consistent, cannot fail to strike every one as extremely interesting, and leading to some very important conclusions. Brown Sequard has maintained that it is impossible for an animal to live for more than forty-eight hours at the farthest, after it has been deprived of its supra-renal capsules. The experiments of Dr. Harley fully controvert this statement, and in addition, M. Philipeaux, of Paris, has removed the spleen, supra-renal capsules, and the thyrcid body from the same animal, which afterwards recovered. Dr. Harley brought with him from Paris a young rat, the off-spring of a mother which had been deprived of spleen and supra-renal capsules. Brown Sequard is also probably in the wrong in supposing that the convulsions and turning which followed his experiments, were due to the removal of the supra-renal capsules; as Dr. Harley has not observed it in his experiments, and is confirmed by a private letter from Professor Virchow, who has also failed to notice this phenomenon.

We had the pleasure, from the politeness of Dr. Brown Sequard, of examining certain microscopic crystals, which he invariably found in the blood of animals from which he had removed the supra-renal capsules. These crystals were unlike the ordinary blood crystals,

being pale and needle shaped. Dr. Harley makes no allusion to this occurrence.

The article, of which we have given a *resume*, is not yet concluded, but will be continued in the next number of the British and Foreign Review: it seemed, however, to have treated of certain points with sufficient completeness to make an analysis of it, even now, profitable to our readers; when it is concluded, we will continue our analysis in another number of the Journal. We ourselves had an opportunity of seeing a case, which was probably an example of Addison's disease, before we knew of Addison's monograph; and though they are extremely rare, yet they are liable to occur in the practice of any one; we would earnestly request, that if any of our readers should meet with such a case, that they will send us its history, and if fatal, a minute account of the appearances of the supra-renal capsules. It is in this way only that we can make progress in understanding this new disease, as it is not likely that a sufficient number of cases will come under the observation of a single individual for purposes of analysis.

Finally, we present the conclusions drawn by Dr. Harley from the results of his experiments:

1st. The supra-renal capsules are not solely fœtal organs.

2d. The supra-renal capsules are not absolutely essential to life.

3d. The removal of the right is generally more fatal than removal of the left capsule.

4th. That convulsions do not necessarily follow the removal of the capsule.

5th. That the absence of this function (in rats,) is attended neither by great emaciation nor debility.

6th. That when death follows upon the extirpation of the supra-renal bodies, it is in most cases in consequence of the injury done to the neighboring tissues; perhaps most frequently the mutilation of the ganglionic system of nerves.

7th. Absence of the function of the supra-renal bodies is not proved to have any special effect in arresting the transformation of hœmatin, or in increasing the formation of blood crystals.

8th. The suppression of the supra-renal capsular function is not attended by any increased deposit of pigment in the skin in its appendages (in rats.)

9th. The problem of the connection of bronzed skin and supra-renal capsular disease is more likely to be solved in the dead house than in the physiological laboratory.—*Buffalo Medical Journal.*

F.

Diet in Typhoid Fever.

A paper on the Epidemic of Typhoid Fever in Paris during the months of August and September last, read lately before the *Société Médicale des Hopitaux*, by M. Hervieux, gave rise to a discussion on the question of the proper time and manner of giving nourishment to patients with this disease. The eminence of those who took part in the debate, and the importance of the subject, is our excuse for making a few remarks upon it.

While the medical treatment of typhoid fever has, in common with that of most acute diseases, undergone great changes within the last thirty years, the amount of food, and the manner of giving it, have been also considerably modified. The relative proportions of medicine and food have been reversed. Formerly much medicine was given, and the patient was starved; now he takes but little physic, and is perhaps in danger of eating too much. How much this change is owing to the prevalence of an asthenic type in all diseases of late years, calling for a tonic, supporting, or stimulating treatment, and how much it is to be ascribed to more rational views on the subject, and to that improvement in therapeutics which is the natural consequence of the progress of pathology and other departments of medical science, it is no part of our purpose to inquire. It is enough that such a modification has taken place in the treatment of all diseases, and in every part of the civilized world.

There is no little judgment required to know when to commence giving food to a patient in typhoid fever, and to know what kind of diet to prescribe. All agree that the strength must be supported by suitable nourishment, that the risk is great in withholding food when the patient begins to feel some desire for it, when the tongue begins to clean, and the pulse loses its frequency; but shall we, from the very first, administer nourishment, or shall we wait until the fever "turns," to use a popular expression? If the patient refuses to swallow any food, shall we make him take it, by threats or any other means in our power? To these questions, different practitioners will give different answers, and hence we are not surprised to find a variety of opinions expressed in the discussion in the *Société des Hopitaux*.

According to M. Barth, who introduced the subject, if the diet is too rigid, at first, the stomach is unable, subsequently, to digest anything; if solid food be given too early, there is danger of accidents afterward. We know that the cicatrization of the intestinal ulcerations is often incomplete, even when convalescence has begun, and perforation sometimes occurs as a consequence of the ingestion of too great an amount of food. M. Trousseau insisted upon a sufficient diet during the first three weeks; after that period, he considered that a large amount of nourishment was dangerous. MM. Blache and Barthez both urged the great importance of sustaining the strength in children in the early stages of this disease by suitable nourishment, but the former thought that, during the period of decline of the fever, extreme caution should be observed not to allow

too much food to be taken. M. Barthez, however, asserted that children who were sufficiently nourished during the early stages, did not experience any inordinate appetite in the later periods of the malady, and that such management prevented the occurrence of accidents during convalescence. He found it a good plan to offer the patient beef-tea or milk, from the very beginning of the fever, but to enjoin it after the eighth or tenth day. M. Bouchut recommends ptisans only for the first week; when the rose spots make their appearance, or in cases of prostration, he allows his patients beef-tea; and broths only at the end of the second week, if the tongue is cleaning, and the pulse less frequent.

The effect of too much abstinence during this disease, is sometimes manifested by vomiting, both of the substances swallowed and also of green bile. In such cases, according to M. Legroux, instead of beef-tea or broth, the patients should be allowed roasted or boiled meat; sometimes the vomiting will be allayed by ham, or cheese, which are often craved by the sufferers.

Toward the close of the discussion, M. Cahen, after urging the utility of a nourishing diet in the commencement of this disease, inquired if any gentleman present had ever known any accidents, and if so, what, in consequence of the early administration of food in typhoid fever. No reply being made, M. Cahen said, "those who allow a sufficient amount of nourishment from the commencement of the disease declare unanimously that they have obtained satisfactory results from it; in opposition to your opinions we offer our own, and to our facts you oppose nothing." These views of M. Cahen coincide, we believe, with those generally adopted in this country, certainly in New England. They are similar to those set forth by Dr. Hooker in his valuable Report, on the Diet of the Sick, to the American Medical Association. But Dr. Hooker goes beyond this; he urges the necessity of compelling the patient to take a certain amount of solid food at the usual hour of his meals, with the view to encourage the natural action of the digestive organs "by a cautious continuance or imitation of the regimen customary in health." No nutriment, liquid or solid, is allowed between the meals, and no drink except small quantities of cold water. After the action of the digestive organs is regulated, the nutrition of the system is to be attended to; simple, dry, farinaceous food is the best diet for several days, then meat should be allowed with dinner, and afterward with breakfast. "As the appetite and digestive action are best sustained by frequent change, different kinds of meat, fish, &c., both fresh and salted and variously cooked, should be used successively."

It is a little remarkable that no particular allusion should be made to the use of wine in the treatment of typhoid fever, either in the discussion in the *Société des Hopitaux*, or by Dr. Hooker. Perhaps this omission may be accounted for by the circumstance that wine and other stimulants are sometimes included under the head of medicine. Of its utility, and even necessity, in many cases, no one who has had much experience in this disease can doubt.

Ambrose Paré.

The plate which appears in our present issue is intended to revive the memory of an ancient worthy, whose great merits have been too much overlooked by the British school of writers,* but who, from his originality, learning and potent influence upon the science during the sixteenth century, well deserves the proud title of the "Father of French Surgery." The lithograph is copied from the bronze statue designed by David d'Angers, and erected in his native city, in honor of AMBROSE PARE.

The dark clouds of the middle ages were already beginning to break away when Paré was born. The great events of the fifteenth century; the revival of letters; the art of printing; the reformation and the discovery of America had effectually stirred from its very foundations the stagnant world. In the midst of this general uprising of the nations, this universal revival of the arts and sciences, medicine and surgery were not found without their representatives. VESALIUS of Padua turned once more to nature in search of her secrets, and by his dissections of the human body, restored anatomy to its place amongst the sciences, whilst Paré, with his bold conceptions and his entire disregard of the prejudices and superstition of his age, rescued surgery from the hands of the barbers, and elevated it to that position which it now holds as one of the noblest of man's achievements.

To show the immense impetus which surgery received from the labors of Ambrose Paré, we will briefly compare its condition when he first entered its ranks with its advances during his life. The youth who at the age of sixteen years came up to Paris, was apprenticed to a barber surgeon, Guy de Chauliac, who, as some historians say, was the instructor of our hero, for the early days of this great man are shrouded in obscurity. He rises at the first cock crow, sweeps out his master's shop, washes the basins and opens the windows, with the purpose of earning his good will by attracting an early customer. He next goes around to the various houses whose occupants are waiting for his services, and his time until after two o'clock is engaged in waiting in their antechambers, or in curling their perukes, oiling their long locks, or putting them in papers, preparatory to the evening toilette. Towards the night, he takes his book to study, but is constantly interrupted by the ringing of the little bell at the door, announcing a new beard to be shaved, or another shock to be combed. In short, so exacting were the "preceptors" of that day, of their unlucky apprentices, that the teachers of medicine and surgery would give their lectures at four o'clock in the morning, so that they might be enabled to prosecute their studies before "business hours."

The young barber surgeon having struggled through the term of his apprenticeship, against all the obstacles thrown in his way, at

* It is a singular fact, that the name of Ambrose Pare is not to be found in the elaborate pages of the Encyclopedia Britannica.

length offers for his examination, and receives the following degree from the hands of his learned board of "medical examiners:"

"We hereby certify, that by virtue of a certain order given by the chamber of police, dated the 16th day ——, and signed ——, we have proceeded to the examination of the above named candidate as to the amount of his experience in the condition and cure of bruises, burns, felons and carbuncles; the various methods of blood letting, and the remedies necessary to be employed in the cure of these diseases, and from the answers of the above named, we are satisfied that he is sufficiently informed to cure the above named burns, bruises, felons and carbuncles; all of which we testify to be true. As witness our sign manual this —— day of ——, in the year one thousand five hundred and forty-five."

This is a specimen of the surgeon's diploma three hundred years ago—this the evidence of scholarship with which Ambrose Paré entered upon his professional career.

It is plain, however, even from the very imperfect account we have of the characteristics of Paré's mind, that he must have been always an original thinker and of a practical common sense order of intellect; and to these qualities we owe the many improvements he introduced into the practice of surgery during his long life. Entering the military staff of the French army during the wars of Francis the First with the Emperor Charles the Fifth, he soon discarded the ridiculous and barbarous customs of his cotemporaries. It is said that in the commencement of his career, after a skirmish, Paré neglected or forgot to pour the boiling oil into the wounds of the combatants, after the custom of the time. He waked up in the night and remembered his dereliction of duty, and earnestly prayed that no ill consequences might result, but the next day, to his surprise, he found that the wounds which he had let alone were doing much better than those he had treated. From that time he changed his practice, and *trusted to nature.* His success was so great, that in a few years he rose to the highest position, and eventually became the surgeon in chief to the three French kings, and achieved for himself a world wide reputation.

This brilliant innovation was soon followed by another, more startling to the prejudiced surgeons of his day, and vastly more valuable in its results. In the first case, Paré exposed the folly of applying boiling oil to the surfaces of recent wounds; but in the second, he also denied the propriety of using the actual cautery in amputations, then universally the practice; and to him modern surgery owes the *practice of tying blood vessels after operations.* These two advances, made by a barber apprentice, transformed military surgery from an attrocious torture to a beneficent and conservative art.

Time and space will not permit us to dilate upon the many brilliant feats performed by Ambrose Paré, some of which are of historical interest. He stood by the death bed of his first royal patron, Henry II, who was killed by a thrust from a lance in the tilt yard;

and he boldly dragged the pike which had transfixed the brain of the Great Guise, whose miraculous recovery after such a terrible accident, added fresh laurels to the fortunate operator. Although a Huguenot by birth and opinion,* he always retained the entire confidence of that bigoted Catholic Catherine de Medicis, and her three sons, whom he faithfully served during their short and unfortunate reigns. His enemies attempted to supplant him in the queen's favor, by charging him with the sudden death of Francis II, whose reign only lasted about eighteen months; but Catherine emphatically denied that her "good Paré" could have been guilty of such a deed.

In 1572, the horrible massacre of St. Bartholomews occurred, but the king, who calmly laid his plans for this wholesale murder, yet claimed the life of his Huguenot surgeon. He sent for Parè and told him he must become a Catholic, but the brave surgeon replied, "Sire, you promised never to ask me to do four things: To enter again into my mother's womb; to be present on the day of battle; to leave your service, or to go to mass." Charles kept him near him during the bloody events of the three days, for, said he, when the priests cried, "Slay him, slay him," "He has saved many lives, his own shall be preserved."

Thus, with increasing honors, we see our true hearted barber surgeon pass through his long career, for he reached the advanced age of eighty years, preserving to the last his hopeful trust in God, his independence of opinion and doctrine, and his world wide charity. "Je t'ai pansè, Dieu te guerisse," was the prayer of his heart, and it was to this faith in the powers of nature, that surgery owes so much. Guided by it, Parè was led to trust to the restorative efforts of the system, and thus abandoned the superstitious customs of his cotemporaries. Let those who daily profit by his wisdom and experience, ever hold in honored recollection old Ambrose Parè, the father of Hippocratic surgery.—*Virginia Med. Journal.*

Parasites of Man.

Dr. David F. Weinland, favorably known among us by his zoological contributions to the American association for the advancement of science, has issued proposals for a complete treatise on the parasites of man, in a zoological and medical point of view. The work will be published by subscription, in four quarto parts, each comprising eighty pages of text, and two or three plates. The first two parts will treat of helminthology; the third, of the parasitic

*Malgaigne labors to show that Pare was not a professing Huguenot, although of heretic parentage, but we are justified in the assertion, on the authority of the Duke of Sully, and Brantome, his cotemporaries.

insects; the fourth, of the parasitic plants that grow on man. The price of each part will be $2 to $3, according to its expense. The plates will be executed in the finest manner by Mr. Sourel, the artist who lithographed the excellent atlas of professor Agassiz's great work. Dr. Weinland will give many original observations on American Helminths, and describe a new genius of tænia peculiar to the negro. His prospectus is accompanied by very cordial recommendations from Dr. Gould and professor Agassiz, which renders it unnecessary for us to do more than call attention to his useful undertaking.—*Virginia Med. Journal.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

The Practice of Surgery. By JAMES MILLER, F.R.S.E., Surgeon in Ordinary to the Queen for Scotland; Surgeon in Ordinary to His Royal Highness, Prince Albert, for Scotland; Professor of Surgery in the University of Edinburgh; Consulting Surgeon to the Royal Infirmary. Revised by the American Editor, Fourth American, from the last Edinburgh Edition. Illustrated by Three Hundred and sixty-four Engravings on Wood. Philadelphia: Blanchard & Lea, 1857, pp. 682. (For sale by Riley & Co.)

This work, designated by the special title of "Practice," really constitutes the second volume of a continuous exposition of Principles and Practice forming a complete system of Surgery.

This volume has been carried through the press by a professional gentleman of Philadelphia, who has added some additional matter and some additional wood cuts. The additions are distinguished from the text by brackets.

The Medical Student's Vade Mecum. A Compendium of Anatomy, Physiology, Chemistry, Materia Medica, Pharmacy, Surgery, Obstetrics, Practice of Medicine, Diseases of the Skin, etc., etc. By GEORGE MENDENHALL, M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical College of Ohio, Member of the American Medical Association, etc. Fifth Edition, Revised and greatly enlarged, with Two Hundred and twenty-four Illustrations. Philadelphia: Lindsay & Blakiston, 1857, pp. 692.

The rapid sale of former editions of this work has called for the present one, the fifth. In the Preface it is stated that, "the care-

ful revision which the present edition has undergone, makes the work more complete and gives it, the Author trusts, higher claims to a favorable reception."

Students will find this work, what it purports to be, a *Compend* of the Sciences which lie at the foundation of a Medical education.

Although such works often condense to obscurity, they nevertheless have a value in fixing in the student's mind the most important facts and principles which engage his attention during his pupilage. Nor are they without importance to the practitioner. About the time medical men receive their honors from college, a process of oxydation commences. Anatomy and Chemistry and Physiology tarnish first in lustre, then other departments; and at last, what was once a bright student becomes a mere rautinist, an automaton, a fossil, no more qualified to practice medicine in an enlightened manner than to take a journey with Enoch to the future world.

The book before us, therefore, if consulted by practitioners of this class, may have the effect of rescuing them from professional perdition. One thing is certain, Dr. Mendenhall has cleared his skirts, faithfully, and if they persist and wont hear him, the blood be upon their own heads.

The Transactions of the American Medical Association Instituted, 1847, Vol. X. Philadelphia: Printed for the Association. Collins, Printer, 1857.

This volume, including the catalogue of Permanent Members, numbers 674 pages. This, we are assured by the Committee on Publication, is the utmost limit, so far as size is concerned, that can get admission into the Post office for distribution. The committee, therefore, suggest that an eye be kept to the size of future volumes on this account.

The word was, at the close of the last session of the Association, that it had been a failure—that Nashville was too far in the interior, and too difficult of access, to secure a large attendance. The volume of Transactions, although not as large as several previous ones, is nevertheless of respectable size—large enough to contain all the discoveries that have been made in Medicine for the last twenty years. It is speculation, not facts which require so much space in medical books.

The volume before us is made up of a number of reports. These have been alluded to heretofore to some extent, and a portion of Frank Hasting Hamilton's on Deformities after Fractures, has been reprinted in this Journal. The report on the Medical Flora, of Washington Territory, is meritorious, not so much on account of its extent as because it is a *contribution* to science.

Physicians, who wish to keep up with the times—who wish to know what the Doctors of the Nation are doing, should possess themselves of this volume. The Treasurer, Dr. Casper Wister, of Philadelphia, will be happy to wait on all who will inclose the cost of publication.

General Therapeutics and Materia Medica: Adapted for a Text-Book with Indexes of Remedies, and of Diseases and their Remedies. By Robley Dunglison, M.D., L. L. D., Prof. Institutes of Medicine in Jefferson Medical College of Philadelphia; Formerly Prof. Materia Medica and Therapeutics in the University of Virginia and Maryland, and in Jefferson Medical College, Philadelphia. With One Hundred and Ninety-three Illustrations. Sixth Edition Revised and Improved. In two volumes. Philadelphia: Blanchard & Lea. 1857.

"The great object of the Author," of the above work, "was to prepare a work on General Therapeutics and Materia Medica which might aid the Medical student in acquiring the main results of modern observation and reflection, and at the same time be to the Practitioner a trust-worthy book of Refernce."

The nomenclature of the last edition of the Pharmacopia of the United States is adopted by the Author.

It is not necessary to give an elaborate notice of this work. The fact that it has reached its *Sixth* edition, and that the author in the present one has spared no pains in its compilation—has availed himself of the labors of Pereira, of Wood and Bache, Christison, Trosseau and Fidaux, and German authors, would seem to leave no doubt about its merits.

The following is the Author's definition of Therapeutics: "Therapeutics is the branch of Medical Science which comprises the doctrine of the management of disease."

This is a very good definition; and it is at once seen, that to be a good Therapeutist, the Physician should have a knowledge of every branch of medicine. It may be added, too, that he should have

discrimination developed to its utmost extent. To be a good Therapeutist indeed, requires not only great natural powers, but culture of the very first order.

When a natural movement of the organism is interrupted in any way, the first inquiry is into the nature of the *cause*, the next into the character and extent of the derangement. Here a variety of sciences come into requisition. Anatomy and Histology for structure, Physiology for what are natural movements, Pathology for changes, on a structure and motion, and Therapeutics for the best method of managing the disease.

Upon the last, the best method of managing disease, there has always been diversity of opinion, and yet this after all, is the great object of medicine. It matters not how much any one knows of the physical sciences or of literature, unless he can make his knowledge subservient to the removal of disease it amounts to nothing—so far as the profession of medicine is concerned. Therapeutics, indeed, is the touch-stone of medical skill. Although it has served as the basis of the various sects, that from time to time have arisen in medicine, it has also served as the test of their validity or weakness by which they have been overthrown. Measured by their efficiency in curing disease, they have, one after another, disappeared from public attention, leaving their Authors in the quiet and peaceable possession of reputations for humbuggery.

A Practical Treatise on Diseases of Children. By I. Forsyth Meigs, M.D., Fellow of the College of Physicians of Philadelphia, Member of the American Philosophical Society, and of the Academy of Natural Sciences of Philadelphia. Third Edition, Carefully Revised. Philadelphia: Lindsay & Blakiston. 1858.

The first edition of this work formed one of a series entitled "The Medical and Practitioner's and Student's Library." The work is now withdrawn from that series and appears as a distinct and separate publication.

The Author states in the Preface that he has endeavored to make this work more methodical and precise than those heretofore published in the country.

"The classification of diseases according to the systems which they affect has been adopted as the most convenient."

The second edition was improved by the addition of thirty pages, in the form of an Essay on the Clinical examination of children.

The articles on Croup, Bronchitis and Pneumonia, have been entirely rewritten. The article on scarlet fever has also been re-written, and the results of a little over one hundred new cases have been added to those contained in the First edition. The present, the *Third*, edition has been carefully prepared.

The Introductory Essay on the Clinical Examination of Children contains quite a number of excellent suggestions. The Author states, "So great indeed are the difficulties encountered by some practitioners who enter on this branch of the profession without proper preliminary preparation, that they never overcome them, but to use the words of Dr. West, 'grow satisfied with their ignorance, and will then with the greatest gravity assure you, that the attempt to understand these affections is useless.'"

Among the causes which embarrass the physician in the diagnosis are the absence of speech and the agitation occasioned by the presence of a stranger in the sick room. Speech is one of our most available means in ferreting out the troubles of adults. The absence of it, however, in children occasions perhaps less inconvenience, than the violent disturbance, both physical and moral, of the child, its fright, agitation and cries.

"To avoid the difficulties just noticed it is always useful, if not absolutely necessary, to conduct certain portions of the examination whilst the child is calm and quiet, and certain other portions whilst it is disturbed and agitated." * * * By the period of calm is meant a condition of total quiescence, in which the child is undisturbed either by internal or external causes of irritation. This condition is best found in *sleep*. This distinction of the examination into two periods or stages is one of the utmost importance in a practical point of view, and should never be forgotten by the physician during his clinical observation of the various symptoms the patient may present."

Materia Medica or Pharmacology and Therapeutics. By William Tully, M.D., Springfield, Mass. Published by Jefferson Church, M.D., 1858; vol. 1, Parts 1 and 2.

The name of Dr. Tully has been familiar for many years, as a popular teacher of medicine, and as one of the most able, erudite and thoroughly scientific scholars in our profession. His experi-

ence, acquired in the course of fifty years of practice and teaching; his numerous places of residence in different sections of the country, and his consequent familiarity with all the varied forms of disease, whether depending upon epidemical influences or those of climate; and his intimate acquaintance with the medicinal powers and virtues of our indigenous plants, which he has spared neither time, labor or expense to definitely determine for himself by actual and careful experiments, together with his varied attainments in, and knowledge of the concomitant sciences; render him peculiarly qualified to edit a comprehensive, systematic and scientific work on MATERIA MEDICA and THERAPEUTICS.

The work is issued in pamphlet form, monthly, and the first volume is just complete. The publisher proposes to issue the second volume in the same manner, as soon as a sufficient number of subscribers is obtained to cover the expense of publication. Although the second volume, treating of individual articles, their uses and therapeutical applications, will necessarily be of more practical value to the physician, yet the first volume, now offered for sale, makes a complete work of itself, and, on account of the introduction of many new terms in the classification, becomes, to a great extent, essential to a ready and perfect understanding of the second. The "institutes of materia medica," or the introduction, covers all the ground occupied by the celebrated treatise of Headland, though its teachings are essentially different in many respects. The classes are the same in number as the separate and distinct medicinal powers, so far ascertained; the name of each class being pure LATINIZED GREEK, and expressing by its signification the peculiar medicinal action of the individual articles belonging to that class, thus following the law for the derivation of similar technical terms which obtains in the other SCIENCES. Whatever opinions may be entertained of the soundness of the principles inculcated by Dr. Tully will not destroy the value of the work. Its striking peculiarity is its tendency to excite others to think, reason and investigate for themselves; to vary their observations and to gain truer experience, both as to the effects of remedies and to many points in pathology; a characteristic of great value, and one hardly possessed to the same extent by any work extant. For originality of thought, and modes of reasoning; for its truly scientific character; for the research and learning it displays; for the example it sets of accuracy and precision in the use of language, so much neglected by medical writers generally, yet so im-

portant to convey medical truth or medical opinion even, no *American* work, at least, can compare with it. In short, the work, thus far, answers all the high expectations the prospectus tended to raise, and, in our opinion, is just what the profession greatly needs.

We are sorry to learn that the enterprising and accomplished publisher, Dr. Church, has not, as yet, been remunerated by the profession in this, his attempt to benefit them, and that the publication of the second volume is endangered by the want of a *reliable* subscription list; and earnestly hope our readers will subscribe for the work, and thus enable the publisher to complete it according to the original plan and design of the author. Communications should be addressed to J. Church, M.D., Springfield, Mass.

H.

PART FOURTH.

EDITORIAL AND MISCELLANY.

Commencement of Starling Medical College.

The Annual Commencement of Starling Medical College was held on the evening of the 2d inst. The Commencement address was delivered by Hon. R. Warden, and the Valedictory by Prof. J. W. Hamilton.

The following is a list of the names of the graduating class in Starling Medical College for the session ending March 2d, 1858, together with the titles of Theses submitted:

Names.	*Subjects.*
S. Day,	Chronic Gastritis.
O. M. Haworth,	Typhoid Fever.
John Hill,	Spermatorrhœa.
D. W. Makenzie,	Theory of Conception.
R. H. Cook,	Small Pox.
D. V. Rannells,	Typhoid Fever.
Rufus Randall,	Intermittent Fever.
O. H. Whitford,	The circulation of the Blood.
Allen White,	Crural Phlebitis.
David Ridenour,	Duties of the Accoucher in Natural Labor.

The Degree of Doctor of Medicine was also conferred upon Hon. B. C. Blackburn, of Tuscarawas Co., Ohio, and also upon Hon. J. M. Strout, of Monroe Co., O.

It is certainly a very pleasant duty to be able to certify to the competency of those who, for the first time, are about to undertake the responsibilities of medical practice. But it is fearful to look at what is implied. A good education and respectable attainments in the elementary branches are of course understood to exist. Much more, however, is necessary, in order to be a physician. Discipline of a high order of the intellectual and moral faculties is required. Perhaps there is no avocation that demands more in the way of intellectual and moral culture than medicine. No case to be treated, but what involves a variety of contingencies—no case that can be regarded as positively unconnected with dangerous or fatal results. Phenomena present themselves every day, the import of which calls in play the severest powers of analysis, and this can only be hoped for by educating the special senses, that no fact, circumstance or event may escape observation; by guarding well the principle of faith as to the accounts given of things by others; by daily discipline of the reasoning faculties so as to avoid the fallacies that so frequently complicate this mode of obtaining knowledge.

Many have supposed that there is something intuitive in the facility with which some physicians recognise the important points, pathological and therapeutical, of a case. The process is called *tact* and there may be something in it—much less, however, than is generally supposed. Those who are really gifted in this way, if analysed, will be found to have minds of cultivation, and highly executive in character.

The great matter that a young man should constantly bear in mind, is that his success in his profession will, after all, depend on his attainments and the facility he possesses in making these available in the work of curing disease.

It gives us great pleasure to state that the *Alumni* of Starling College, as a general rule, are distinguishing themselves, and taking a front rank, wherever they are located, as Practitioners of Medicine and Surgery. "*Qui non proficit, deficit.*"

Births, Deaths and Marriages in the State of Ohio for the Year 1857.—We have just received the Report of the Secretary of State to the Legislature relative to the registration of Births, Deaths and Marriages in the State for the past year.

All reports of this kind must necessarily be imperfect and unsatisfactory for a time. Those to whom the execution of a law of this kind is committed fail for a while in getting perfect returns. But as the parties involved become more acquainted with the nature and importance of their duties, and the details of the law are perfected, the results will become reliable. What statistical inquiries of more importance than those which ascertain the number of deaths in particular districts, examine the nature of fatal diseases and seek by comparing the conditions under which the various forms of disease flourish, to arm the State with power to save? After a law of the kind has been in operation for a time, it will be found to have also created in this, as similar laws have done in other countries, data that will serve as an invaluable bases of legal inquiries. By such laws the identity and rights of individuals who have lived in times anterior may be traced out with a degree of certainty often attainable in no other way.

We could have wished to have seen the Report before us more complete—the tables are not footed up, nor are the general results declared.

A New Medical Journal at Louisville.—Rumor has it, that a new Journal is about to be started at Louisville, Ky., by Dr. D. Yandell. We know of no one more competent to such an undertaking. Dr. Y.'s education and his professional associations will enable him, we should think, to make a journal not only instructive but eminently attractive. We should be very happy to welcome the contemplated work to our "Exchange list."

New Journal of Physiology.—Dr. Brown Sequard has sent us the prospectus of a journal of physiology, of which he is to be the principal editor, and which is to be published quarterly, on the 1st of January, April, July, and October—each number to contain from one hundred and sixty to two hundred pages. He is to be assisted in his enterprise by Drs. Ch. Robin, Ch. Rouget, and Tholozan, &c.

His journal, in addition to pure physiology, will embrace—1. Or-

ganic chemistry, hygiene, toxicology, and legal medicine, in their relations to physiology. 2. Descriptive anatomy, comparative anatomy, teratology, and normal and pathological histology, so far as they illustrate physiology. 3. The applications of physiology to the practice of medicine, surgery and obstetrics.

The subscription will be 18 francs, at Paris, payable in advance.

We invite the attention of the profession in this country to this Journal. It may be obtained through I. Pennington & Son, of Philadelphia.

The Western Lancet and Observer have been consolidated, and henceforth the issue is to be called "The Cincinnati Lancet and Observer." Dr. Blackman, the former editor of the Lancet, retires not at all pleased with the pecuniary support which the Lancet received while under his charge. Such treatment was very far from being deserved. Dr. Blackman made an able editor. The Lancet, while under his charge, was among our most welcome visitors. It was always filled with matter, which whether measured by taste or utility, would compare favorably with the best journals of the country.

When will subscribers to Medical Journals learn to appreciate the maxim: *"don't muzzle the ox which tramps out the corn!"*

Although retired from the onerous duties, annoyances, etc., of the editor, we shall feel disappointed if Dr. Blackman does not continue, in another character, to still wield his pen.

"Vexed Questions in Ethics."—Under the above caption the Cincinnati Lancet & Observer has some remarks on the McClintock affair, the Journals, etc.

The Editor seems to have sharpened his pen for a general onslaught on all the Journals that have not coincided with him in regard to all that he has said on the subject. He says

"When the Editors of some Journals are making vapid and sickly excuses for high unprofessional conduct, it is refreshing to find the truly conservative, accomplished and distinguished gentlemen here and there speaking out the true doctrines that should prevail."

How is this? Has any of the Journals been engaged in offering excuses for the conduct of Dr. McC? Our Journal has not. All, as far as we have read, are unanimous in condemning the act of Dr. McC. Dr. McC. now condemns the act himself.

The diversity of opinions among the Journals, is in relation to another matter: Should a medical man, after he has committed a sin against our Code of Ethics, and made full comfession thereof, and gave the proper evidence of repentance, be *forgiven* by his brethren; or should he be proscribed and denounced forever as having committed an *unpardonable* sin? *Christianity* is on one side of this question, as we understand it; and we simply stated that fact.

We want no controversy with the Editor of the Lancet & Observer on this or any other subject. The disposition he has always manifested for the purity of the profession is very commendable. His punishment, however, of offenders is too *Draconic* to suit our taste—that's all.

Wythe's Pocket Dose Book. Branstan's Hand-book of Practical Receipts.

The above works, got up in very neat and durable style by Lindsay & Blakiston, Philadelphia, are for sale in this city at the House of Randall & Aston.

Pacific Medical and Surgical Journal. Edited by JNO. B. TRASK, M.D., and DAVID WOOSTER, M.D. San Francisco. Monthly, at *Five Dollars* a year.

It gives us pleasure to hail the appearance of another Medical Journal from our possessions on the extreme West. The Journals have now spanned the continent. Wherever civilization goes they go, and although poorly rewarded, they have nevertheless the consolation of the "Good Samaritan"—and of course also his reward in the world to come.

It is only about ten years since California became a portion of the American Confederacy. She is not only now a State of the first class, but from her mineral resources has become the Ophir of the American people. The learned professions, too, are represented there by gentlemen of scientific and literary attainments unsurpassed by those of older States. The Physicians, from what we know of

them, represent the learning and skill of the most renowned seats of medical and surgical science in each hemisphere.

Transactions of the Belmont Medical Society for 1856–7. *Bridgeport, Ohio.*

The Transactions commence with an essay on *Mind* and *Insanity*, by Dr. G. Affleck, of Bridgeport. The papers which follow are, by E. Gaston, M. D., on *Veratrum Viride;* Reports of a case of *Amputation*, by Drs. Campbell, Estep and McBane; Report on the *Improvement* of Medical Science, by Wm. Estep, M.D., Chairman; and an account of the *Trial* of Mary Henderson for the Murder of her own child, by Wm. Estep, M.D., Loydsville, O.

These papers are very creditable to the gentlemen with whose names they stand connected. They show that the Belmont Society is progressive; and in the right direction for useful results.

Death of Dr. Parsons. The following notice in regard to the late Dr. Samuel Parsons we find in one of our city newspapers—the *Ohio State Journal*. It was written by one who seems to have been intimately acquainted with the deceased, and that too for a long time.

Dr. Parsons deserves a notice more strictly professional. He was one of the pioneers that survived the privations and dangers of nearly half a century's service in the profession. He possessed many traits of character that would be instructive and useful to others.

The Profession of the City met and passed Resolutions expressive of their respect for the memory of the deceased, a copy of which will be found below.—Editor.

"Obituary.—Departed this life on Wednesday, the 30th ult., Dr. Samuel Parsons, in the seventy second year of his age.

The deceased was a native of the town of Reading in the State of Connecticut, and was born July 30, 1786.

The ancestors of Dr. Parsons were of English origin, and immigrated to this country about the middle of the eighteenth century. His father was of that respectable and intelligent class in new England, who are the proprietors and cultivators of the soil, and from whom have descended many of the most enterprising, virtuous and eminent men of our country.

"The writer of this brief notice knows but little of the parentage or early life of the deceased; but from his admirable moral character and highly cultivated mind, he feels authorized to say that Dr. Parsons must have received the most careful parental supervision and judicious training. It is, however, known that he received an academic education in the town of Litchfield, in his native State. That he was a dilligent student may be inferred from the fact that he was an accurate classical scholar, and, in early life, had acquired an intimate knowledge of the various sciences immediately connected with his subsequent profession. His mind, naturally orderly and exact, led him also to the study of mathematics, in which difficult science he had attained great proficiency, and when a youth, had mastered some of its higher branches.

"In 1809, at the age of about twenty-three, he was admitted to the practice of Medicine, and, leaving his native State, settled in Millersburgh, an inconsiderable village in Pennsylvania.—This position was unfavorable to a mind conscious of its own powers, and desirous of extended usefulness. It afforded a better opportunity for study than for practice, and his attention was directed to the West, which promised a larger field for the gratification of his laudable ambition to be useful to his fellow men. He left Millersburgh, and arrived in Franklinton, in this county, on the first day of the year, 1811. The location was equally fortunate for the young physician and the inhabitants. Here he entered upon the business of life with unclouded prospects of success. His talents were soon brought into exercise, and his professional skill universally acknowledged. At the commencement of his practice, he was without a competitor, which would have been a dangerous position for one less determined to climb the rugged and difficult ascent to professional eminence. This circumstance in him produced no relaxation of efforts. Without the stimulus of competition he was prepared to tax his powers to their utmost.

"His principal capital consisted in a very complete surgical apparatus, a large stock of carefully selected drugs and medicines, and a small professional library of the more approved authors of those days. With his books he exclusively passed his time when not engaged in professional duties. He participated in none of the amusements common to persons of his age. At that early period there were indeed few social advantages amongst us.

"Then, more than at the present time, the two great departments of medical science were blended in the same practitioner. Every physician was supposed to be a surgeon, and every surgeon a physician, and combined with both was the practice of what was then known of dentistry. There was still another interesting department of medical practice in which Dr. Parsons became pre-eminently distinguished for his skill and success. Indeed in the various branches, he had few equals and no superiors.

The practitioner was his own apothecary, and never set out on a visit to a patient without a case of surgical instruments and a great variety of medicines. Thus, he was provided not only for the special call, but for others which might be required in his distant journeyings. At the time Dr. Parsons commenced practice, there was not a pleasure carriage of any sort in the country, and for a reason then obvious—the state of the roads being such as not to admit of the use of such conveyances. Neither present nor future generations, even with the help of the imagination, can conceive the hardships and labors of a physician in full practice at that early period. The roads most traveled were deep and miry, and not unfrequently impassable. Nor was it a thing by any means unusual to be obliged to thread at midnight a mere bridle path for many miles, or, with the assistance of a guide, to penetrate through a trackless forest. Deep streams were often to be forded, and sometimes swam to reach the residence of the sufferer.

In 1815, three years after the seat of government was permanently established, Dr. Parsons removed to Columbus, where he has ever since resided.

Dr. Parsons, during the long course of his practice, never declined a call to the bed of sickness because he required rest and repose; nor stopped to calculate the difficulties to be encountered in reaching his patient, or the chances of loss or gain to himself. Although of rather a delicate constitution, yet by strict temperance and well regulated habits, and more than these, by an enlarged philanthropy, he was enabled to endure privations and hardships of which few were capable. He has been known, in his practice, not to have enjoyed uninterrupted repose in his bed for more than eighty consecutive nights.

He was deservedly called, not only the physician of the poor, but their friend. In the long period of his extensive practice he was

never known to give the smallest preference to his patients on account of wealth or elevated position.

Dr. Parsons was peculiarly fitted by nature to adorn his noble profession. He was endowed with a remarkably vigorous mind, quick and clear perceptions, great decision and firmness of purpose and unwearied assiduity.

Like every other scientific and properly prepared physician, he was sometimes mortified at the preference given by the uninformed to arrogant charlatans; but even this, from the amiability of his nature, was treated with pity rather than resentment. He was often, by circumstances, compelled to undertake surgical operations; but practice in this branch of medical science was irksome to him, and, in the latter years of his professional life, he declined it as far as possible.

When we were visited with that mysterious and appalling pestilence, the cholera, he maintained his position, while some of his brethren fled in terror from the presence of the awful scourge. It is generally believed that, on this most trying occasion, he received the seeds of that disease which finally terminated his useful life. When the pestilence subsided, he found himself attacked with *bronchitis*, which became chronic and could never be eradicated. He several times sought relief in a milder climate; but the death malady still clung to its victim.

In 1845, finding his physical powers giving way under the disease, he retired from active practic, although frequently afterwards called in consultation by the most eminent of the profession.

During his long continued disease, his cheerfulness never forsook him, and his interest in the affairs of his country and in humanity remained to the last.

On the 30th day of December, a little after mid-day, Dr. Parsons died as he had lived, at peace with all mankind, and, so far as the friends who surrounded his death bed could judge, at peace with his God.

Without his solicitation, Dr. Parsons received the degree of Doctor of Medicine from the Medical College of Ohio.

He neither sought nor declined office. In 1813, he was appointed resident surgeon in the North Western army, and continued in that office until nearly the close of the war. He was several times appointed a director of the benevolent institutions of the State, and the affairs of some of them were reduced to order by his exertions.

In 1843, he was elected a Representative to the General Assembly, and his course, while a member of that body, was marked by integrity and independence, and an ardent desire to ameliorate our social institutions. As a public speaker he was clear and logical, and his perfect candor and sincerity gave him a great influence with that body. Although Dr. Parsons was grave and dignified in his deportment, he was ever affable and kind in his intercourse with every class of society.

In sentiments and manners he was most remarkably refined. No impure or trifling expression ever escaped from his lips. No wound was ever intentionally inflicted by him on any human being. In business transactions he was exact, but most scrupulously just. Without disparagement to others, it may be safely said his benefactions were as numerous and extensive as those of any citizen among his survivors. No small portion of the labors of his life was gratuities to the sick and the needy. Nor was this all. No medicine, however expensive, was withheld from an indigent sufferer when there was the smallest chance of its affording alleviation or relief. In a vast number of cases, known to few except the recipients or their friends, he supplied, from his own means, articles necessary to comfort, and as an aid to restoration to health. In the distribution of alms, he steadily followed the divine precept which insures the higher reward. They were not bestowed to be seen of men. His benevolence to his patients extended beyond this life. His executors are expressly directed to release claims for professional services in case payment should be found inconvenient or burdensome.

The moral character of the deceased was without stain or blemish. His public and private duties were performed with the same exactness and conscientiousness. He was the kind and affectionate son, brother, husband, father, friend. A more pure, virtuous and useful man has seldom lived. It is not known that he has left an enemy upon earth.

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Death of Dr. Samuel Parsons.—At a meeting of the Physicians of this city, on motion, Dr. WM. M. AWL was called to the Chair, and Dr. R. N. Barr appointed Secretary. On motion, a committee of five, consisting of Drs. W. M. Awl, R. Hills, J. B. Thompson, G. J. Sachse and S. M. Smith, were appointed to draft resolutions expressive of the sense of the meeting—when the following report was offered and adopted:

REPORT.

Whereas, in the all-wise dispensings of a holy and merciful God, our friend and father in the profession, Dr. SAMUEL PARSONS, has been called away from us; *and, whereas*, from his long connection with our profession, his faithfulness and kindness in the ministrations of his Art, under all the toils and self-denyings of a pioneer life, and all the ties that bound him to a community in which he had lived for near half a century, and for unsullied probity of character, in all the relations of citizen and friend, it becomes us to record his many virtues; therefore,

Resolved, That in the death of Dr. SAMUEL PARSONS, we mourn the loss of a father in our ranks, one who faithfully illustrated its noble and generous characteristics in the midst of the trials and difficulties of an early western practice; who, in the advances of a higher civilization, maintained the same honorable eminence, who finally retired from the practice to enjoy the quiet of a ripe old age, and a justly earned affluence, in the midst of a community where he was respected and beloved, and gratefully remembered.

Resolved, That his purity of morals, domestic habits, and faithful discharge of every public trust committed to his hands, add a richer value to his professional worth.

Resolved, That we tender to the bereaved friends our sincere sympathy in their irreparable loss; and that we will join them in paying the last sad service of the living to the dead.

Resolved, That a copy of the foregoing resolutions be transmitted to the family, and one furnished to each of the city papers.

R. N. BARR, Sec'y.

Columbus, Jan. 2, 1853.

DR. LIVINGSTONE'S TRAVELS.—Our leading article in this No. is a very brief digest of Dr. Livingstone's Travels in South Africa. The book interested us very much, and we, as a consequence, supposed an account of it would please many of our readers. It is written in clever style, and with every appearance of truthfulness. The Author went to Africa as a Missionary to teach the natives the Christian Religion. He went, we suppose, in obedience to the command, "Go ye out into the world and preach my Gospel to every creature." After being in the country a number of years, and mixing freely with the natives, he found that in order to carry out the prime purposes of his mission, the natives required to be somewhat civilized, to be elevated to a certain level, before they could be made to appreciate and understand the Religion that suits the white race, the religion that seems only to take where there is a pretty good kind of mental soil. Seeing, therefore, that the elevation of the interior

tribes could only be brought about by opening up an intercourse commercial and social between them and European nations, Dr. L. commenced the work of exploration, in order to see what were the natural and most available outlets of the continent. He traveled from the Cape Colony to the centre of the interior near Lake Ngami; thence to the Western coast at Loanda; thence across the continent in an oblique direction, to the termination of the Zambesi river on the Eastern coast.

The descriptions of what he saw are in the general very satisfactory. His knowledge of natural history was sufficient to enable him to give a general outline of what he observed in botany, zoology, geology, etc. His contributions to ethnology are not calculated to change what has been advanced in regard to the negro race by those who have made the subject a study. The physical, moral and intellectual peculiarities of this race appear to have been pretty well understood, and its *status* defined by ethnographers. What he saw of a mixture of the white and black races confirm the general impression that it is attended with deterioration. The negro is improved in intellect, but loses his physical energy. The European is dwarfed in both. Although constantly engaged in war with each other, by which it might be supposed that a higher order of courage would be cultivated, such, Dr. Livingstone says, is not by any means the case. The negro, he remarks, is essentially cowardly. He attributes his success in making his way across the continent to the circumstance that he made the natives believe that he was not afraid of them. Knuckling to their demands, or being terrified by threatening aspects would, he thinks, have proved fatal to him and his party, in a number of instances.

The state of medicine in Africa is on a par with other things. Empyricism and superstition exist here in purity. Have certain results followed the administration of a drug? If so, the relation of cause and effect is at once established. The doctor is held as a consequence responsible for the results following his medicine. If they are favorable, all is right; if unfavorable, and the patient dies, the doctor often does too. *African Fever* seems to be the staple disease of the country. The natives in all the alluvial districts are affected with it, and many of them by it annually destroyed. This, or some thing like it, seems to be mortiferous to the white man.

Dr. Livingstone's contributions to geography are among the most valuable connected with his travels. He has unfolded "South Central Africa," and has shown that instead of its being a sterile, moun-

tainous region, it is a great plateau, made up of forest and natural meadows, well watered and exceedingly fertile, something like what we have, and of which we are so proud, in the Mississippi valley.

As it regards the practicability of S. Africa ever becoming a theatre for the enterprises of any department of the white race, time can alone determine. Its fine rich soil, its noble rivers, are inviting; but the climate is far from genial to white blood; it is, indeed, destructive, if the most trustworthy observations continued for centuries are to be credited.

The profession of medicine has great reason to be proud of Dr. L. He has told us what we did not know before. His example, too, is instructive. It shows what may be accomplished by energy of character and purity of purpose, even in the absence of uncommon natural gifts.

Duration of Cancer.—A case of some interest presented itself at the Cancer Hospital on the 25th of August, in the person of a female, aged seventy-four years, the subject of cancer of the left breast for twelve years. She had been a patient at this hospital since its foundation, with the exception of the last three years, during which time she had been in good health. She came to show an ulcerated tuberculous mass in the same breast, the size of a small pear; otherwise the disease had dried up and disappeared. She still looked a hale and hearty old woman.—*Lancet*, Sept. 5, 1857.

Iodine in Obstinate Vomiting of Pregnancy.—M. Eulenberg strongly recommends tincture of iodine for obstinate vomiting. Other practitioners have tried it with varying results; but according to the experience of M. M. Becquerel and Buisson, the tincture acts most advantageously when combined with iod. of pot. The following is M. Buisson's formula: Tr. iod. ʒj; Iod. pot. ʒiss; Aq. dest. ʒxxx. A tablespoonful is placed in a glass of sugared water, and this is to be divided into three doses, to be taken during the day.—*Med. Times and Gaz.*

Cancer in a Woman eighty years of age.—We saw, on the 6th of October, a woman, eighty years of age, at the Cancer Hospital, with well-marked scirrhus of the left breast, which appeared about a year ago. Notwithstanding her great age, she had the blooming, healthy

cheeks of a country girl of eighteen; her general health was perfect, and under the use of tonic remedies, and soap-and-lead plaster spread on leather, with a little camphor, the cancer has diminished in size, and its progress is completely arrested for the present. This is by no means an exceptional case of the arrest of the progress of cancer at this hospital; for we have observed several in whom the disease has been kept stationary for years, with no other inconvenience than the presence of the tumour in the breast, and the knowledge on the part of the patient that it was still there. The soap-and-lead plaster is one of the principal agents in effecting this desirable object; the lead appears to possess some peculiar sedative influence on the disease.—*Lancet*, Oct. 24, 1857.

Dislocation of the head of the Femur on the Pubis during the act of Swimming.—C. W——, aged seventeen, a sailor, while swimming in the Serpentine, and in the act of "striking out," felt a catch in the right groin, which he thought was the cramp. He immediately made for shore. On landing, he found that he limped in his gait. He could walk a little the next day, but on the following day he was unable to walk, feeling his knee, as it were, drawn up. He was admitted into St. Mary's Hospital, under the care of Mr. Ure. He complained of great pain at the upper and inner part of the right thigh, aggravated on any attempt to move the limb; there was a fulness in the above situation. He also complained of pain referred to the outer side of the knee. Soothing means were employed to relieve the pain. Mr. Ure, after a careful examination, ascertained there was dislocation of the hip-joint forwards, upon the pubis. The least pressure on the ilio-pubal region gave great pain. The right buttock was flattened; there was a notable depression in the situation of the trochanter, instead of the usual prominence; the limb was shortened; the thigh and leg were both in a state of extension, the knee and foot rather everted.

On the 27th of August, after the patient was rendered insensible by chloroform, Mr. Ure flexed the thigh towards the pelvis, and then rotated it outwards, in doing which he felt a distant snap. The luxation was thus reduced, and the limb restored to its normal condition. To keep the joint quiet, a long splint was directed to be applied along the outer side of the limb.

Aug. 28th.—The patient had been free from all pain since five P. M. yesterday, and had continued perfectly comfortable up to September 3d.

The displacement was obviously due to the circumstance of the body being suddenly thrown backwards while the limb was on the full stretch during the act of "striking out." The pain was, no doubt, caused by the strain of the crural nerve, which lies over the neck of the bone. The shortening of the limb was owing to the elevated position of the head of the femur; the eversion, to the drawing action of the quadratus, obturator internus, &c., muscles. In this variety of dislocation, the head of the bone will be found either to have raised up the ilio-psoas muscles, or lodged behind the blood vessels. The round ligament, according to Hyrtl, is torn.

The patient left the hospital quite well in the first week of October.—*Lancet*, Nov. 7, 1857.

Excision of the Elbow Joint eighteen years ago.—Some of the most instructive cases we meet with in the hospitals are those in which patients who have had operations performed long ago again present themselves. The other day Mr. Cock operated again upon a man whose elbow had been excised eighteen years ago by the late Mr. Key, on account of strumous disease. The man, who is now aged 45, and in good health, stated that he had enjoyed throughout the whole interval and until quite lately very excellent use of the limb. He had been employed as a letter-sorter. The motion had never been free, and latterly he had been attempting to work with it in a new position, and one which gave pain. As the result of this an abscess had formed, and there was now evidence of the existence of diseased bone. Mr. Cock removed some small necrosed fragments from the end of the humerus, and cut away others with the bone forceps. There is every prospect that the part will heal soundly, and that the triumph of conservative surgery will thus be further prolonged.—*Med. Times and Gaz.*, Oct. 24, 1857.

Injurious Effects of Caustics in Cancer of the Tongue.—A case of an extremely painful nature, of cancer of the tongue, came under our notice on the 26th of May, at the Cancer Hospital, in a poor woman, aged forty-two years, from Camdentown. It had not

been of long existence, and some short time back the disease was not bigger than the point of her finger, in the form of a tubercle. She was at this time seen by Mr. Lawrence, of St. Bartholomew's, who advised its removal. She, however, would not consent, but became a patient under Dr. Fell's care, and continued under him three months. During this time, he applied caustics to her tongue, generally about nine in the morning, and they were retained on till five in the afternoon, during which time she went without food. She suffered most horrible pain, and, to use the poor woman's own words, "the pain was so intense, that for three hours she could not see." Whilst under this treatment, the cancer increased to six times its former size, and now presents a deeply ulcerated and indurated surface at the right side of the organ, with much swelling and pain. She looks completely worn out from previous suffering. The first thing attended to at the Cancer Hospital in such a case, is to improve the general health by tonics and good diet, and accordingly cinchona and hydrochloric acid were ordered internally, with the use of a lotion of biborate of soda, half an ounce to the pint of water, and the local application of sulphate of copper. Dr. Marsden has found sulphate of copper and borax the only two substances of actual service in cancer of the tongue, and the moment their use is discontinued, the disease progresses.—*Lancet*, June 6, 1857.

Influenza in England.—Influenza in an epidemic form, it is stated (*Med. Times and Gaz.*, Dec. 5, 1857,) is threatening England as it did in 1847. As a precursor of cholera, this disease should be watched with peculiar interest. Diphtheritis is also spreading over the country.

Sidenham Society.—We regret to announce that this Society has been dissolved. Great efforts are, however, being made to reconstruct it. Should these be successful, as we sincerely hope they may, the works which will be issued will be more modern, and of a more practical character than those issued by the old Society.

Faculy of Medicine at Paris.—M. Marc See, as the result of a brilliant *concours* just concluded, has been appointed to the important post of *Prosector* in the Paris Faculty.

Medical Reform.—It would be a happy day for medicine which inaugurated so radical a reform as that all future members of the profession should possess a degree in arts. At present, however, it would be almost Utopian to expect to accomplish an undertaking of so great a magnitude. Permanent and healthy advances are not made *per saltum*, they grow out of the steady pressure of a public opinion, the growth of which is itself slow and gradual. It is not by sudden transition, either in the moral or the physical world, that the highest developments are reached. So we must endeavor to help on the tendency of the times rather than to push forward to an advance for which society is hardly as yet prepared.—*Lancet*, Dec. 12, 1857.

Yellow Fever at Lisbon.—Since the 9th of September last, yellow fever has raged in Lisbon, and during one hundred and five days 13,482 cases occurred, with 4,759 deaths. The last cases were reported on the 22d of December, and the plague was apparently stayed by the setting in of cold weather. Twenty years ago, it was generally believed that yellow fever, in its virulent epidemic form, was confined to intertropical regions; but, of late years, it has crept along the coast of America to places where it was formerly altogether unknown, and has now attacked, in a malignant form, a city of Europe, situated in latitude 38 deg., 42 min. The French authorities have therefore taken the alarm, and wisely adopted precautions to avert, if possible, the outbreak of the disease in France. The lazarettoes, which have been long disused, are preparing for the reception of invalids; and Dr. Melier, Inspector-General of the French sanitary services, is making a tour of the ports, and adapting rules in each of them for the due establishment of quarantine. One large transport ship, which arrived from Senegal with 186 invalids on board, has been prevented from landing her passengers at Brest, because she had unfortunately entered the Tagus on her passage, although no yellow fever appeared on board. In such cases, the International Sanitary Convention decrees that ten days must elapse without the occurrence of yellow fever between the touching at an infected port and the removal of quarantine.—*Lancet*, Jan. 9, 1858.

Loss of French Troops in the Crimea.—Dr. Scrive, who acted as Physician-General to the French army during the last war with Russia, has just published a book which contains a painful account of the losses and sufferings endured by the French troops landed in the East, but particularly by those engaged in the siege of Sebastopol. Of 309,278 officers and men sent from France during that short war, 200,000 entered the hospitals, and were treated professionally, 50,000 for wounds received in action, and 150,000 for diseases of various kinds contracted during the campaign. The first troops which embarked in France were attacked with cholera, which followed them to Athens, Gallipoli, Varna, and the Dobrudstcha. On their arrival before Sebastopol the cholera again attacked them, and the receptions in the military hospitals during the month of January, 1855, amounted to 9,000. They were chiefly treated for cholera, scurvy, frost-bites, and wounds of every description. Typhus fever shortly after set in. The health of the army was better during the spring of 1855, but the cholera reappeared in July, and placed 4,500 men *hors de combat.* Typhus fever set in again, and added to the mortality. On the 8th of September, Sebastopol was taken by the allied armies, but, nevertheless, between the 1st of September, 1855, and the 1st of April, 1856, of 145,120 French troops under arms in the Crimea, 48,000 entered hospitals. Dr. Scrive says that the scurvy prevailed at this period, the constitution of the men being impaired through fatigue and privations. He further adds, that the most disastrous period of the campaign, in a medical point of view, was during the months of February and March, 1856. A violent typhus, engendered by the infection of the heaps of refuse in the camp, struck down more than 19,000 soldiers at the end of the campaign, notwithstanding the precautions adopted by the medical staff. It is said that the number of sick in hospital, in proportion to the force under arms, was never so great in any former campaign. Of the medical staff, 83 physicians or surgeons fell victims to their devotedness—"an enormous figure," observes the author, "when one reflects on the small number employed."—*Med. Times and Gaz.*, Nov. 28, 1857.

Extreme Suffering from the Application of Caustics.—On the 3d of November, we were present at the Cancer Hospital when a woman presented herself for the first time for advice about a can-

cerous right breast, much enlarged and indurated, with a large excavated ulcer, discharging most offensively; with pain agonizing in the extreme. She looked worn out and exhausted from suffering, her countenance was wan, thin, and pale, and she was suffering from pain in the left as well as the right breast. Her name and address, which she had no objection to make publicly known, is Margaret Smith, residing at 1 James Street, Larkhall Lane, Vauxhall. Her age is forty-seven, and she has had cancer of the breast between eight and nine years. The tale, as related by herself, was to the effect that she had recently been a patient in the Middlesex Hospital, under the care of Dr. Fell, for her diseased breast. Whilst there, a powder was blown into the ulcer, which caused *dreadful pain*, and almost took her senses away. She nearly lost the use, she states, of the entire side from this powder, and it has affected her senses of smell, taste and hearing. The discharge becoming very offensive, a lotion was applied, without either correcting it or removing the pain; and thirdly, an ointment was applied, which she further observed "made her ten times worse." She thinks she was made a great deal worse—much worse than before she went into the hospital. She was in this hospital three months, suffering, as she herself describes, great torture.

This patient, we will observe, is only one example of a number who similarly complain, several of whom have become patients at this hospital, and whose cases we have referred to on two or three previous occasions.

The treatment adopted in such a case as this is of the most stregthening and generous character in regard to diet and regimen, so far as the constitutional powers will admit. Tonic remedies of dilute hydrochloric acid, conjoined with bark, and a little opium (although the latter is seldom used here,) are administered almost as a rule; and lastly, and not the least important, a well-made carrot poultice is applied three times a day.—*Lancet*, Nov. 14, 1857.

Large Tumour of the Axilla.—A very remarkable example of an axillary tumor was presented to the notice of the pupils at King's College Hospital on November 7th, and which was submitted to an operation for removal by Mr. Fergusson. The patient was an eld-

erly woman, the mother of several children, and at the present moment about six months *enceinte*. She became an inmate of the hospital about a week ago, when, on careful examination and attention to her history, Mr. Fergusson advised the removal of the growth. It appears that she first noticed a nodule near the axilla six years ago, which slowly increased in size till up to six months ago, when its growth became somewhat rapid, so that a tumour the size of a cocoa-nut had now formed, which extended into the axilla, forwards under the great pectoral muscle, and downwards and forwards towards the left breast. This last position gave it the appearance at first as if springing from the mammary gland; but a careful examination showed that it was a distinct mass, although in close proximity to it. Although the patient was in a pregnant condition, it was deemed best to remove it at once from the rapidity of its growth, and accordingly this was accomplished while she was under the influence of chloroform, administered by Dr. Snow. In commencing the operation, a large transverse incision was made over the tumour —the skin covering which was mottled with enlarged veins—cutting through the fibres of the pectoralis major muscle. This, however, was not found sufficient, and the fibres of the lesser pectoral were divided. The greater part of the tumour was detached with the fingers; but a projecting lobe extended upwards under and behind the clavicle, which was removed by the finger. At this point some care was requisite as Mr. Fergusson had immediately in front of his finger the subclavian artery and vein, and some large branches of nerves, and in the short space of four inches the course of the blood-vessels was exposed, the slightest wound of which would have caused some trouble to stop, as well as the risk of air entering the vein in such a situation. An artery was divided at the back part of the tumour, together with a nerve, which was believed to be the subscapular; it was the only vessel that required tying. Although the tumour was soft and friable, every portion of it was removed, and the wound was closed by stitches. In character it seemed to be fibro-plastic in a state of softening, and certainly resembled in many respects, as Mr. Fergusson remarked, tumours in the region of the parotid. Our hope is that it may not be malignant, and cause future trouble. In some parts of it there had evidently been effusions of blood.—*Med. News.*

American Medical Association.—The Eleventh Annual Meeting of this Association will be held in the city of Washington on Tuesday, May 4, 1858. The Secretaries of all societies and other bodies entitled to representation in the Association, are requested to forward to the Secretary, *Alexander I. Semmes, Washington*, correct lists of their delegations as soon as they may be appointed; and the Committee of Arrangements earnestly desire that the appointments may be made at as early a period as possible.

Medical Students in Dublin.—The number of medical students in Dublin who have entered for dissections during the present session is 473; to these may be added about 100 attending on lectures but are not dissecting, and it will show the whole number of medical students to be about 573.

MM. Andral and Berard.—M. Andral, Professor of Pathology and General Therapeutics, and M. Bèrard, Professor of Physiology to the Faculty of Medicine of Paris, have been authorized, on account of their bad health, to decline lecturing during the first *semestre* of 1857–8. M. Lasèque is to act as M. Andral's substitute, and M. Beclard as M. Bèrard's.

Medical Students in Paris.—The number of medical students taking out inscriptions for 1857–8 amounts to 901 for the Doctorate, and 126 for the grade of *Officier de sante*—total, 1027. The number of new inscriptions amounts to 158. Last year the total was 1000, of which 126 were new. The following is a comparison of the last eight years:—

1850	.....	1223	inscriptions	429 new
1851	.....	1300	"	313 "
1852	.....	1437	"	334 "
1853	.....	1055	"	158 "
1854	.....	964	"	151 "
1855	.....	966	"	180 "
1856	.....	1000	"	126 "
1857	.....	1027	"	158 "

Treatment of Intermittent Fever by Douches of Cold Water.—M. Fleury has addressed a note to the French Academy of Sciences announcing that he has treated successfully 114 persons, attacked with intermittent fever, simply by *douches* of cold water. Forty-three of these cases were recent and 71 old, and had resisted other treatment. In all these last cases, there was a swelling of the spleen or the liver, or of both, and a state of anæmia or even of cachexia. In some there was a complication of dysentery, hematuria, scurvy, albuminuria or hallucinations. No other mode of treatment had been employed but cold *douches*, and there has been only one reappearance of the disease. Only one douche has been enough to cure in some cases, never has it been necessary to employ more than five. This influence of the douche exists only when it is applied just before the fever sets in, or immediately after it has begun.—*Med. Times and Gaz., Dec.* 12.

Dry Cupping in Typhoid Fever.—Affections of the respiratory organs occurring in the course of typhoid fever constitute a very dangerous complication; and M. Beecher has treated them of late at the Beaujon with great success by the application of large numbers of dry cupping glasses to the chest, and especially to the lower extremities. The number has varied from twenty to eighty cups, divided into two series, one applied in the morning, the other in the evening. The number in some patients has amounted to five hundred in ten days. Large ecchymoses form on the limbs, but these have never given rise to the least mischief; while the thoracic symptoms become effectually relieved. M. Beecher declares that since he has followed this plan, the mortality of these fevers with this heretofore dangerous complication has fallen to zero; and M. Bourdon, of the Lariboisiere, reports as favorably. M. Beecher has not found the same benefit result in the comatose form of typhoid fever. —*Ibid.*, from *Bell do Therap.*, Nov. 15.

Coffee and Lemon-juice in Ague.—M. Von Holsbeck draws attention to a mode of treatment he has found useful. Infuse an ounce of well-roasted coffee in three ounces of boiling water, and having strained the fluid, acidulate it with lemon-juice. The whole is given at once, five hours before the paroxyism—*Med. Times and Gaz. Dec.* 27, 1857, *from Presse Belge, No.* 42.

SURGICAL INSTRUMENTS,

BY K. KLOTT.

ETWEEN RICH AND FRIEND STS., WEST SIDE,

COLUMBUS, OHIO.

Mr. KLOTT, who has been for a long time in the employment of Geo. Tieman, of New York, has opened a new establishment for the manufacture and sale of all kinds of Surgical and Dental Instruments of the finest quality, which he proposes to sell on the most reasonable terms.

He keeps constantly on hand a great variety of instruments, which he invites physicians, surgeons and dentists to call and examine before purchasing elsewhere. He hopes, and is determined to furnish the western profession with as good a quality of instruments as can be found in our largest cities.

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From an acquaintance with Mr. Klott, and an examination of his instruments, I feel fully justified, and indeed I take pleasure, in recommending them in the highest terms. I have had ample opportunities to test the instruments of many of the most celebrated manufacturers of the world, and I have no hesitation in saying that for beauty of finish and fineness of steel and temper, they are not excelled by any I have ever seen. They are equal to Tieman's or Schively's best.

J. DAWSON.

N. B. MARPLE, M. D.,

APOTHECARY AND DRUGGIST,

(*City Bank Building*)

COLUMBUS, OHIO.

Successor to R. P. Little.

WILL wholesale and retail Medicines, Chemicals, Drugs, Surgical and Dental Instruments, Paints, &c., &c., at exceedingly low prices His assortment includes every article usually kept by Druggists; as he is daily receiving his stock, he can present many inducements to physicians and druggists in this and adjoining towns, if they will only favor him with a call.

Having enjoyed many years' experience in compounding medicine, he will promptly and very carefully fill Physicians' prescriptions, and to this branch of business he will give special attention, as he regards it of the highest importance. None but the best medicines will be used for this purpose, and he will strictly observe chemical principles in their combination. As he purposes devoting his time entirely to the occupation of a druggist, he solicits the patronage of medical men and the public generally. [Jan. 1853.

DR. McMUNN'S ELIXIR OF OPIUM.

THIS IS THE PURE AND ESSENTIAL EXTRACT FROM THE NATIVE DRUG.

It contains all the valuable medicinal properties of Opium in natural combination, to the exclusion of all its noxious, deleterious, and useless principles, upon which its bad effects depend.

It possesses all the sedative, anodyne, and antispasmodic powers of Opium, *To produce sleep and composure. To allay convulsions and spasmodic action. To relieve pain and irritation, nervous excitement and morbid irritability of body and mind, &c.*

And being purified from all the noxious and deleterious elements, its operation is attended by

No sickness of the stomach, no vomiting, no costiveness, no headache, Nor any derangement of the constitution or general health.

Hence its high superiority over Laudunum, Paregoric, Black Drop, Denarcotized Laudanum, and every other opiate preparation.

THE ELIXIR OF OPIUM IS GREATLY SUPERIOR TO MORPHINE.

1. In its containing all the active medicinal virtues of Opium in native combination, and in being its full representative, while Morphine, being only one of its principles, cannot alone, and that in an artificial state of combination too, produce all the characteristic effects of so triumphant a remedy, when four or five of its other valuable principles are excluded.
2. In its effects, the Elixir is more characteristic, permanent, and uniform, than any of the *artificial compounds* of Morphine.
3. And as a *Preparation*, it is not liable to decompose or deteriorate like the *Solutions of Morphine*; and thus is obviated a serious objection, which has prevented the latter from being used with precision and effect.

To speak summarily, the Elixir of Opium, as a remedy, may be adopted in all cases in which either Opium or its preparations are administered, with the certainty of obtaining all their salutary and happy effects, without being followed by their distressing and pernicious consequences. And in the greatest number of those cases in which no other form of opiate can be used without occasioning the worst effects, it can also be used with the most eminent success and the happiest results.

The discovery of this inestimable preparation, so highly purified from all the objectionable elements of the native drug, without ever changing or impairing its medicinal virtues or efficacy, is a triumph in the chemical analysis of opium never before achieved, and places the Elixir of Opium pre-eminent in the list of all the preparations of opium hitherto made.

Those who take opium and its ordinary preparations, cannot be ignorant of the fact, that its distressing and pernicious effects result from the operation of its deleterious principles, and that the tremors, languor, and lassitude with which its devotees are afflicted, and for which they repeat the dose to relieve, are sensations of its own creation. In such cases, this preparation will afford a gratifying substitute.

But in consequence of the exclusion of these deleterious principles from the Elixir of Opium, it is not liable to derange the functions of the system, nor injure the constitution and general health—hence its high superiority in all cases in which the long-continued and liberal use of opiates is indicated and necessary to allay pain and spasmodic action, and induce sleep and composure, as in cases of fractures, burns or scalds, cancerous ulcers, and other painful affections.

It possesses yet another important advantage, which is of paramount consideration in the treatment of some of the most violent and dangerous spasmodic diseases, such as Tetanus, Epilepsy, Hysteria, Tic Doloreux, Convulsions in Hydrophobia, &c., &c., which is, that the quantity necessary to overcome and control diseased action in those dreadful maladies, is not limited by the deleterious

influence of those objectionable principles, but can be given in large quantities with safety, inasmuch as their proportions in opium and its several preparations containing them, are so great that by the time a sufficient quantity is taken for the anodyne and antispasmodic properties to allay and overpower the pain and spasmodic action in some of their most violent attacks, the poisonous influence of the objectionable elements will preponderate, and prodnce narcotism, stupor, and apoplectic death; and the patient dies the victim of the poisonous effects of the intended remedy, before the valuable properties can give the desired relief.

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November, 1853.